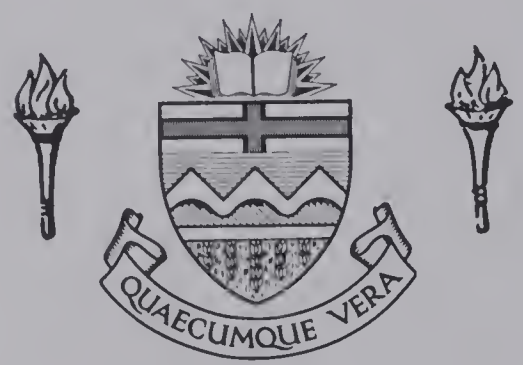

THE UNIVERSITY OF ALBERTA

GERMAN DATIVE OF POSSESSION

by

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "German Dative of Possession" submitted by Ekkehard W. Kottke in partial fulfillment of the requirements for the degree of Master of Arts.

ABSTRACT

The aim of this thesis is to trace the underlying structure of the German noun phrase, and particularly of the noun in the dative case. A cross section of past investigations of and a transformational approach to the dative of possession are presented and evaluated in terms of formal characteristics of German syntax.

ACKNOWLEDGEMENTS

I wish to express my sincere appreciation to Professor Henry K. Stanford for his supervision of this thesis, to Professor M.L. Marckworth for her most welcome critique, to Professor William F. Klatte for his encouragement during the initial stages of this work, and to Professor E. Egert for his comments on German usage.

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CHAPTER I

1.0. Purpose

This chapter reviews the treatment of grammatical case and especially of German dative case in the light of modern transformational grammar.

1.1. Proposal

This study explores some implications of recent proposals by Charles J. Fillmore at the Texas Symposium on Language Universals[1] for the dative case in German. Fillmore suggests that the notion of case be given the status of a major category, represented by K, in the framework of transformational syntax, with a corresponding shift of functional load from relational devices like subject or predicate to K. His proposal then implies in effect a reversal of the roles of case and of syntactic relations of a sentence with respect to deep and surface structure as outlined in Chomsky's Aspects of the Theory of Syntax. We recall that Chomsky lists the devices "subject of" and "predicate of" in phrase structure markers,

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[1] "The Case for Case," 1967.

hereafter referred to as P-markers, such as the one reproduced on p.65[2] as categories, while case is treated, as Fillmore points out, as a surface phenomenon.[3] We are concerned here with the nature of the changes presented by Fillmore and the evidence in the German case system that would lend support to such changes. Basically Fillmore's proposal represents a refinement on Chomsky's subject-object dichotomy. But rather than be satisfied with this crude distinction, Fillmore prefers to sub-categorize these elements into at least six universal case categories.

This thesis contains the additional proposal to derive most dative constructions in German from a semantically possessive relationship between noun phrases and to account for exceptions in terms of overriding co-occurrence restrictions imposed by certain verb classes or prepositions. The main supporting evidence for this proposal will be drawn from verb phrases and prepositional phrases[4] that may govern both the dative and the accusative case in German.

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[2]Noam Chomsky, 1965. cf. other references pp. 69, 86, 94, 96, 102, 107, 108, 129, 130. Notice also definitions pp. 71, 106 and 116.

[3]Ibid., pp. 221-2 (footnote 35 to Chap. 2.)

[4]The notion 'prepositional phrase' will undergo restatement in this paper.

The proposal differs from Fillmore's in that the German dative is treated as a rewrite element with an imbedded sentence as its source that contains both members of the relation. The relation is formalized and the leftmost member of the relation is deleted by a recoverable erasure transformation.

1.2. Deep Structure

Fillmore's distinction between surface case and deep case is a crucial one since the latter is unencumbered by all manner of restrictions and exceptions present in the former. The transition from the one level to the other must, however, be accomplished at some stage of our language description and analysis. As a rule, such a transition is made in the transformational component of the grammar, and it is this component which must justify the use of our labels in the deep structure as represented by our P-markers. The principle of circumspection, as Halle has outlined it in his fourth condition of The Soundpattern of Russian[5], keeps us on the lookout for transform potential of our proposed phrase structure rules. This amounts to the question of how to convert our P-marker into a grammatical sentence,

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[5]Morris Halle, 1959, p. 24.

i.e., how to map the deep structure into the surface. One of the problems facing us in this objective is the simple fact that our primary linguistic data contain only surface structures, and often ungrammatical ones at that, the deep structure being the result of our analysis. Thus, we have to decide whether the case system encountered in German warrants representation in the deep structure; and if so, we have to determine the goodness of fit of surface case and deep level representation that may warrant this procedure. Many of our guidelines involve the transformational notions of simplicity of representation and descriptive adequacy in connection with a detailed review of the language data to be attempted shortly.

1.3. The Traditional Approach

Five concepts of traditional grammarians will be investigated in this paper. They are:

the dative case,

the prepositional phrase,

the adverb,

the relative clause,

the appositive.

We will be concerned with overlapping of these concepts, their interrelations, and their interpretation as imbedded sentences.

1.3.1. Traditional Dative

Discussion of case figures very prominently in historical and comparative investigations. Behaghel traces the historical origins of Germanic dative to Indo-European dative, ablative, and locative, stating

> Der germanische Dativ vereinigt in sich Verwendungen des idg. Dativs, Ablativs, Lokativs und zum Teil des Instrumentalis. Der indogermanische Dativ bezeichnet
>
> A Die Person, der ein Vorgang, eine Handlung sich zuwendet.
> B Den Zweck eines Vorgangs, einer Handlung . . .
>
> Das raeumliche Ziel einer Bewegung hat der indogermanische Dativ nicht bezeichnet. Wo in den Einzelsprachen etwas Derartiges vorhanden ist . . . ist es Weiterbildung des Gebrauchs unter A . . .[6]

It should scarcely be surprising that historically the dative case is associated with personal relationships and Fillmore typically associates this case with animateness. Behaghel conjectures that the earliest instance of syncretism probably involved the collapse of ablative and dative, though still kept separate in Latin[7], and in contrast to the collapse of ablative and genitive in Greek. The cause of the observed syncretism is imputed to phonological change,

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[6]Otto Behaghel, Deutsche Syntax I. 1923, p. 609.

[7]Behaghel, I. 1923, p. 609

> Es werden wohl die aeusseren Schicksale der Endungen fuer den Zusammenfall verantwortlich zu machen sein.[8]

Bloomfield agrees with this point of view in Language, commenting, "Homonymy and syncretism, the merging of inflectional categories, are normal results of sound-change."[9] But the fact that the ablative collapsed with dative in Germanic and with a case expressing possession in Greek could be a significant indicator of underlying commonalities of both dative and genitive cases and is adduced here in support of the status of German dative as a possessive case.

Curme formulated a similar generalisation when he listed a dative of interest[10], using the examples

(1) Sein Herz schlug der ganzen Menschheit

(2) Das Pferd lief ihm fort

which are easily paraphrased as 'his heart belonged to all of mankind' and 'the horse belonged to him and it ran away.' Again, we look for insights in traditional grammar that may lend credence to our thesis.

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[8]Ibid. p. 610.

[9]Leonard Bloomfield, Language 1933, p. 388.

[10]George O. Curme, A Grammar of the German Language. (1922) 1960, p. 501.

1.3.2. The Prepositional Phrase

Curme defines the term 'preposition' on the basis of its distribution. A preposition consists of a connective element and "as this connective particle usually stands before the dependent word, it is called a preposition . . ."[11] This distributional criterion, although quite important to the traditional grammarian, rates only surface representation in the generative framework, and a deeper analysis of the concept will be attempted shortly. Curme also notices the proximity of prepositions and adverbs in their ability to limit the force of the verb.[12] He makes some claims about the meaning of some prepositions which we wish to investigate rather closely as they touch on the main subject of this paper. The claim states:

> A prep. often seems to show a relation of nouns where in fact the relation is between a noun and a verb. Thus, Geld zur Reise 'money for the journey' is an elliptical expression = Das Geld, das zur Reise bestimmt ist. Thus also, Herr ueber Tod und Leben = Der Herr, der ueber Tod und Leben gesetzt ist.[13]

The notion of an ellipsis has again a rather modern appeal since it is so central to transformational theory. It is interesting to see that Curme interprets

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[11] Ibid. p. 355

[12] Ibid.

[13] Ibid. p. 356

the prepositional phrase

(3) Herr ueber Tod und Leben

as a sentence. However, he seems to be mistaken when he derives the main relation as existing between the preposition and the injected verb from such a procedure unless we wish to understand by relation a strictly formal (and uninteresting) one which means 'present in the same sentence'. In fact, the two items related to each other, in a literal and spatial sense, by 'ueber', are 'Herr' and 'Tod und Leben'. The case in the prepositional phrase in (3) is ambiguous but may be clarified by reference to the injected verb which may be 'gesetzt ist' as suggested by Curme, though native speakers who are likely to use this phrase would probably prefer 'der _____ verfuegt', i.e., 'The Lord, who dispenses life and death at will', an idea that calls for the accusative in (3).

The apparent ambiguity of case in (3) stems from the type of preposition used in this sentence. The preposition 'ueber', along with a number of others listed below, may govern both the dative case and the accusative case. The actual selection is based on semantic considerations best indicated by the verb of the sentence, which might be omitted in some instances.

The list of these prepositions is:

an	hinter	neben	unter
auf	in	ober (S.G.)	vor
	inner(t)	ueber	zwischen[14]

Curme comments, "these prepositions . . . govern the dat. when the place in which is denoted, whether motion or rest in that place is expressed, but the acc. when the direction towards or into an object is expressed . . ." His examples are,

(4) Er kam in die Stadt

(5) Er kam in der Stadt an[15]

Curme also observes a peculiar relationship between case and prepositions, brought out in his examples,

(6) Man freut sich einer Sache

(7) Man freut sich an einer Sache[16]

'Sache' appears in the possessive in (6) and in the dative in (7). This brings out the close relationship between these cases again, since (6) and (7) may be considered to be paraphrases of each other.

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[14] Ibid. p. 357.

[15] Ibid. p. 378. Regarding the verb 'come' in English see Fillmore, 1966.

[16] Ibid. p. 356

1.4. Universal Grammar

Motsch, who has investigated the traditional approach to grammar in his article "Untersuchungen zur Apposition im Deutschen", finds several faults with it. Traditional grammar treats appositions as special cases of attributes which agree with a substantive in number and case and are modifications of it.[17] This definition establishes that appositions are constructions made up of nominal phrases whose syntactic relation is called 'attribute'.

Motsch bypasses questions of case congruence. He weighs the notion of attribute and circumscribes it intuitively as 'complement of a substantive'.[18] This weighing of what is to be understood by a traditional term or category characterizes much work in generative grammar today. It is a realization of an existing continuum of investigations into language, and no traditional term is being discarded merely because it may be misleading or because it is burdened with a stigma of earlier misconceptions about language. Thus, Chomsky pays specific tribute to the work of traditional grammarians in a chapter of his Aspects of the Theory of

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[17] Wolfgang Motsch, Studia Grammatica V. p. 87.

[18] Ibid. p. 88.

Syntax dealing with Universal Grammar.[19]

Motsch seems to use the information supplied to him in older works on grammar to ask such questions as 'what underlying regularity in the language may have prompted the investigator to identify a group of nominals as appositions.' A possible answer suggests that the nominals involved are not mere groups of noun phrases, but adjuncts in their own right which contain a more or less essential modification, precision, or rectification.[20] The German term for 'adjuncts' used in this connection is the compound word 'Zusaetze', and from this to 'Saetze', 'sentences', is but a small step, which Motsch has taken since. Referring to earlier treatments he comments,

> Such imprecise formulations must be replaced in a grammar by statements which utilize exclusively grammatical terminology. This is achieved in a generative grammar by a hierarchical description of syntactic complexes.[21]

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[19]Noam Chomsky. 1965, p. 5.

[20]Motsch, op. cit. p. 89

[21]Ibid. Translations mine.

1.5. The Base

The base component of the grammar consists of a set of rewrite rules that subcategorize an abstract categorial symbol, S, into major categories and these into minor ones. Typically, this operation involves branching, and these rules are therefore referred to as branching rules. The exact boundary between major and minor categories is not provided, and the hierarchy is merely set up so as to exclude the possibility of rewriting a major category by a morpheme. The latter is inserted later by lexical substitution rules, which are not defined more closely in this paper. However, the hierarchy implies an order between rules, i.e. it is not possible to write each rule on a card and then to shuffle the deck before use.

A similar order is implied horizontally by the position of the labeled nodes vis-à-vis each other. This amounts to an implicit labeling of branching lines of the P-marker derivable from each set of rewrite rules.

The base rules are binding on all sentences. This means that once we have decided to rewrite S as VP plus NP, it is not possible to rewrite another, more deeply imbedded S as DATIVE in the same grammar. Such restrictions are especially relevant to recursive rules which can only operate properly if their constraints are clearly understood.

1.6. Transformations

The transformational component is also made up of rules that basically perform two functions, singly or in combination. These are to eliminate a branch from a source P-marker, or to add one. Transformations are only performed if a structure index given in the rule is met in the string or P-marker that is to undergo the transformation. As such the operation is said to be context-sensitive. Unlike phrase structure or P-rules, they are characterized by their ability to look at a P-marker in its entirety and are said therefore to display the power of variable reference. Transformations make P-markers 'behave' and are the main justification for the positing of categorial nodes in the latter.

1.6.1. Derived P-Marker

A source P-marker representing a set of rules that has been utilized in the formation of a particular sentence (and that is a subset of all the base-rules, which are not completely enumerated in this paper) may meet the structure index of one or more T-rules. If in this case the T-rule is an obligatory one, it must be applied to the P-marker, yielding a derived P-marker.

The derived P-marker, however, is not merely a tree that differs only by the effect of so-called injections or ejections performed by the T-rules. John Ross has demonstrated that the new tree must be 'pruned' so as to represent the resulting terminal string, including all the structural ambiguities contained in it.[22] Thus, from a technical point of view, the derived P-marker does not impart complete information about its source P-marker, given the T-rule responsible for its creation, but must be considered along with its source P-marker in order to make this information available. This seems to be a reasonable request since the source P-marker is usually represented wherever a derived P-marker is being presented.

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[22]John Robert Ross, "A Proposed Rule of Tree Pruning," 1966, p. IV-1-18.

CHAPTER II

2.0. Purpose

This chapter outlines the functioning of the proposed dative of possession and of the base component of a grammar of German.

2.1. Outline of Dative of Possession

Central to the notion of the German dative of possession proposed in the following pages is the construct 'POSS' which is derived from the node 'V' representing the verb of a sentence. POSS is treated like any other transitive verb of the dictionary with respect to its ability to take a direct object. Unlike other verbs however, the marker 'POSS' is never realized phonetically since a rule at a late stage of the grammar converts POSS to null. Until that operation, POSS serves as a signal that initiates a number of transformations, the most important of which converts the direct object to a noun phrase in the dative case.

Conceptually, we may think of POSS as meaning 'possessed by' or 'belongs to', although we must keep this notion sufficiently abstract so as to accommodate

both NP's and S's as subject of the verb 'POSS'. Thus sentence (2), 'Das Pferd lief ihm fort',1 contains the personal pronoun 'ihm' in the dative case, and it is not being attempted here to trace legal ownership of the horse by the type of grammatical construction used in (2). But nevertheless, the sentence does express a certain degree of ownership of, or durative association with, the horse with respect to the speaker, as will be shown when we contrast POSS with the parallel construction 'TRANS' which expresses transitory relationships and governs the accusative case.

The proposals affect many aspects of the grammar, notably the so-called adverb and prepositional phrase. On the other hand, it will be shown that the POSS construction patterns like the appositive and the relative clause. The latter constructions are treated as imbedded sentences, parts of which are elided by transformational rules. The same aspect pertains to the functioning of the dative of possession.

The remainder of Chapter two will develop the P-markers of sentences containing the proposed dative of possession and Chapter three will present transformational

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[1]All numbered examples together with their English equivalents are listed in the Appendix.

implications and related structural evidence in support of the above proposals.

2.2. The Dative Transformation

For purposes of exposition, we will begin by presenting a transformational rule at the outset of our grammar fragment. After some development and restatement of this rule, we will present an underlying P-marker and attempt to clarify the proposals contained in it.

The transformation, taken from Isačenko, converts a genitive construction into a dative one, as in the following pair of sentences,

(8) Der Ruecken des Mannes schmerzt

(8a) Dem Mann schmerzt der Ruecken

In proposing his transformational rule that derives (8a) from (8), Isačenko utilizes the following case marking convention which we will also adopt in this paper:

NP_0 -- noun phrase in nominative case

NP_1 -- noun phrase in accusative case

NP_2 -- noun phrase in dative case

NP_3 -- noun phrase in genitive case

The dative transformation[2] is written as follows:

1	2	3	
der Ruecken	des Mannes	schmerzt	$\xrightarrow{DT}$
$[d + kN]_0$	$[d + aN]_3$	V_{it}	
2	3	1	
dem Mann	schmerzt	der Ruecken	
$[d + aN]_2$	V_{it}	$[d + kN]_0$	

Here 'd' is the determiner and 'a' and 'k' are inherent features of nouns, animate and body part (Koerperteil) respectively.

The transformation consists of two steps; step one changes the order of the elements from 1, 2, 3 to 2, 3, 1, and step two changes the case of element 2 from possessive (genitive) to dative. We may therefore rephrase the rule as follows,

T1: $NP_0 \quad NP_3 \quad V_{it}$

$1 \quad 2 \quad 3 \longrightarrow 2, 3, 1$

Condition: 1 has the feature [+ body part].

T2: $NP_3 \longrightarrow NP_2$

Condition: Rule T1 has been applied.

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[2]Alexander Isačenko, "Das Syntaktische Verhaeltnis der Beziehungen von Koerperteilen im Deutschen," Studia Grammatica V. 1965, p. 17.

These rules raise a number of problems. It is implied that the left hand side is closer to deep structure than the right hand side, since the right is removed from its source P-marker by at least one transformation. Isačenko specifically refers to 'Oberflaechenstruktur' of (8a). It seems quite arbitrary however to assign one or the other level to either one of the pair of sentences at this particular stage.

2.2.1. Domain of Dative Transformation

Secondly, the transformation is restricted to body parts only. It should strike us as strange, however, to find a particular chapter of German grammar applicable to body parts only. We investigate first the motivation underlying such an arrangement.

Thus, the sentences

(9) Meinem Freund starb die Mutter

(10) Peters Vater ist uns gestorben[3]

are investigated by Isačenko as possible candidates of the dative transformation. However, he states with respect to (10) especially that

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[3]Ibid. p. 19

> it can under no circumstances . . . qualify as a transform of the dative transformation. . . . we believe that in sentences in which not only kinship relationships, but any noun, may be the subject, the dative of personal relationship should not be derived from a possessive construction. We believe that traditional grammar which has listed such datives as dativus commodi/incommodi did more justice to our intuited representation of the facts by assigning a special category to the dative construction mentioned above.[4]

As stated in 1.1. the thesis of this paper contains the proposal to derive most dative constructions in German from a possessive relationship, and to account for exceptions in terms of overriding co-occurrence restrictions.

Isačenko's sentence (10) cannot be paraphrased either by (10a) nor by (10b) following,

(10a) Peters Vater ist gestorben

(10b) Unser Vater ist gestorben

The original sentence contains more information than either of the attempted paraphrases, (10a) and (10b), and the reason for this lies in the fact that 'Peters Vater' meant something to 'uns',and it is obviously this relationship of belonging that is expressed here by the dative case. Thus sentence (10) permits the analysis

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[4] Ibid. p. 20.

(10A) Peters Vater#Peters Vater gehoert zu
uns#ist gestorben

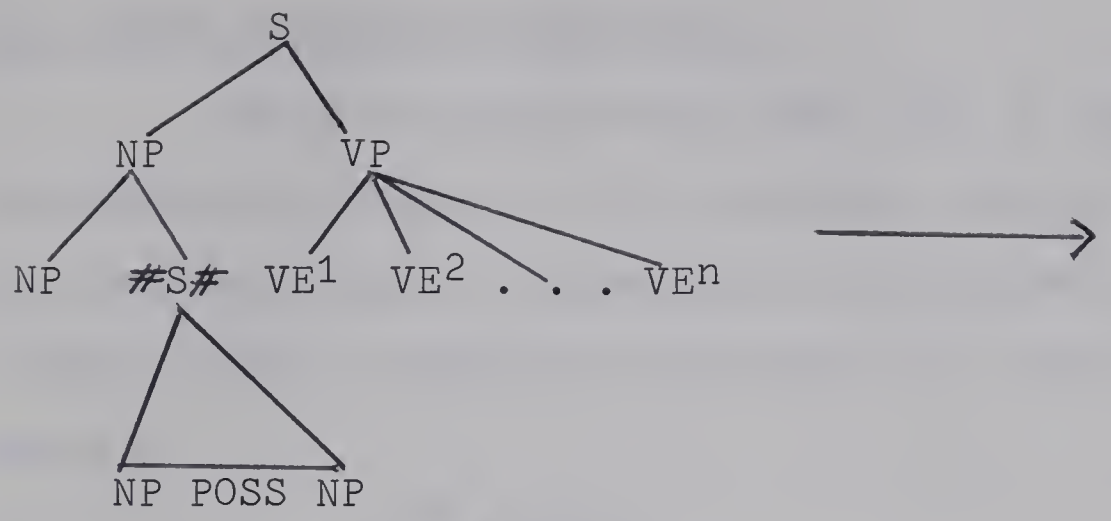
where 'uns' may be replaced by 'euch', 'den Russen', etc. (10A) results in

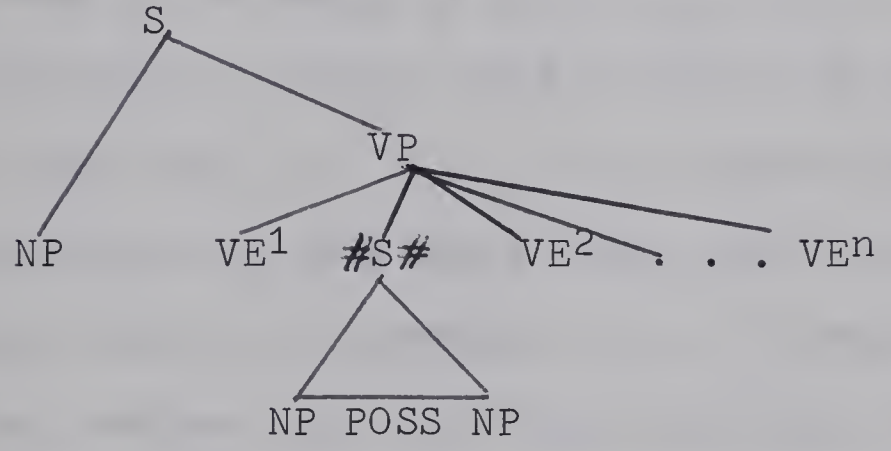
(10AA) Peters Vater#uns#ist gestorben

by way of an erasure transformation that deletes 'Peters Vater gehoert zu' on account of the obtaining identity condition between that NP and the subject NP. The deletion is said to be recoverable. (10AA) is further subjected to a permutation transformation which shifts 'uns' into a position preceding verbal element 2 of the VP.

The permutation transformation is well founded since it may be extended in scope to operate not only on dative objects, but also on other objects, negation, and even the subject of a sentence. Fig. 1 illustrates the operation of this permutation.

The source P-marker proposed in this transformation may be distinguished from the type proposed by Isačenko by the imbedded #S# found in the former. The function of the triangle and the expression suspended from it is explained more fully in 2.4. By itself the triangle simply means that an exact derivation of categories is omitted at this stage.





Note: VE's are verbal elements. The exact categories given in the Appendix under the heading, 'A Skeleton Grammar of German'.

Fig. 1

2.3. Some Proposed Conventions

Since the high-level node 'VP' in Fig. 1 is an essential element of the structurel description of the transformation, a convention is proposed to specify a string that is uniquely dominated by a given node as follows:

$$x \hat{} y \setminus VP$$

This should read 'x and y are uniquely dominated by VP'. Utilizing this convention, the triangle in Fig. 1 may be shifted by the following rule, which is restated in the Appendix as T-Shift

$$S \longrightarrow \emptyset \longrightarrow S \,/\, VE^1 \_\_\_ VE^2 \ldots VE^n \setminus VP$$

The expression S stands for $\langle$NP POSS VP$\rangle$ which eventually yields the 'uns' in (10). It is erased (hence $\longrightarrow\emptyset$) and replaced at a specified place that is enclosed by elements said to be governed by a VP (hence $\setminus$ VP). This position, marked '___' in the structural description, operates like a store and accepts a hierarchy of qualifiers and elements, e.g. the morpheme 'gestern', which is a re-write of PAST, viz.,

$$PAST \longrightarrow \emptyset \longrightarrow PAST \,/\, VE^1 \hat{} \text{ uns } \_\_\_ VE^2 \ldots VE^n \setminus vp$$

or yet another dative of possession, 'an der Ruhr', viz.,

$$S \longrightarrow \emptyset \longrightarrow S \,/\, VE^1 \text{ uns gestern } \_\_\_ VE^2 \ldots VE^n \setminus VP$$

The exact mechanics of the injection of 'an' will be treated in Chapter three. The same chapter contains explicit machinery that will permit us to eliminate the redundancy which is implied in the expression VE since it is later specified as dominated by VP. Notice that the order of the transformations just listed is fixed since a sentence like '*Peters Vater ist gestern uns gestorben' is ungrammatical. We have said that much by stating that the store accepts a "hierarchy of qualifiers".

We have now extended sentence (10) to read

(11) Peters Vater ist uns gestern an der Ruhr gestorben

The phrase 'an der Ruhr' represents the cause of death, (dysentery) and has traditionally been designated an adverb. Retracing our own analysis, we may ask ourselves about any parallelisms existing between the two datives in (11), i.e. 'uns' and 'der Ruhr'. We suggest that the traditional notion of 'adverb' is unsatisfactory since the cause of death is more meaningfully associated with the patient, who was afflicted or possessed by it, than with the verb 'gestorben', (to die). As we readily conclude, 'Peters Vater' was sick with 'Ruhr', and the analysis incorporated into the rules given above may be stated verbally,

(11A) Peters Vater #Peters Vater gehoerte der Ruhr an# ist uns gestern gestorben an

which yields

(11AA) Peters Vater ist uns gestern#der Ruhr# gestorben an

In the analysis represented by (11AA) 'an' is the only 'adverbial' constituent left.

2.4. Formal Representation

In the following the relationship 'A belongs to B' shall be signified by the notation ⟨A POSS B⟩ where A and B constitute an ordered pair, of which B will eventually appear in the dative case.

It appears that Isačenko avoided a more general application of the relationship ⟨A POSS B⟩ as an underlying form of German dative of possession because his theory does not permit an immediate constituent analysis like

unser (Peters Vater) . . . . .

at the deep level. But even if it did permit this step, his theory would have been lacking the necessary apparatus for further probing down to the constituent sentence level which alone can expose the relevant relationship between 'Peters Vater' and 'uns'.

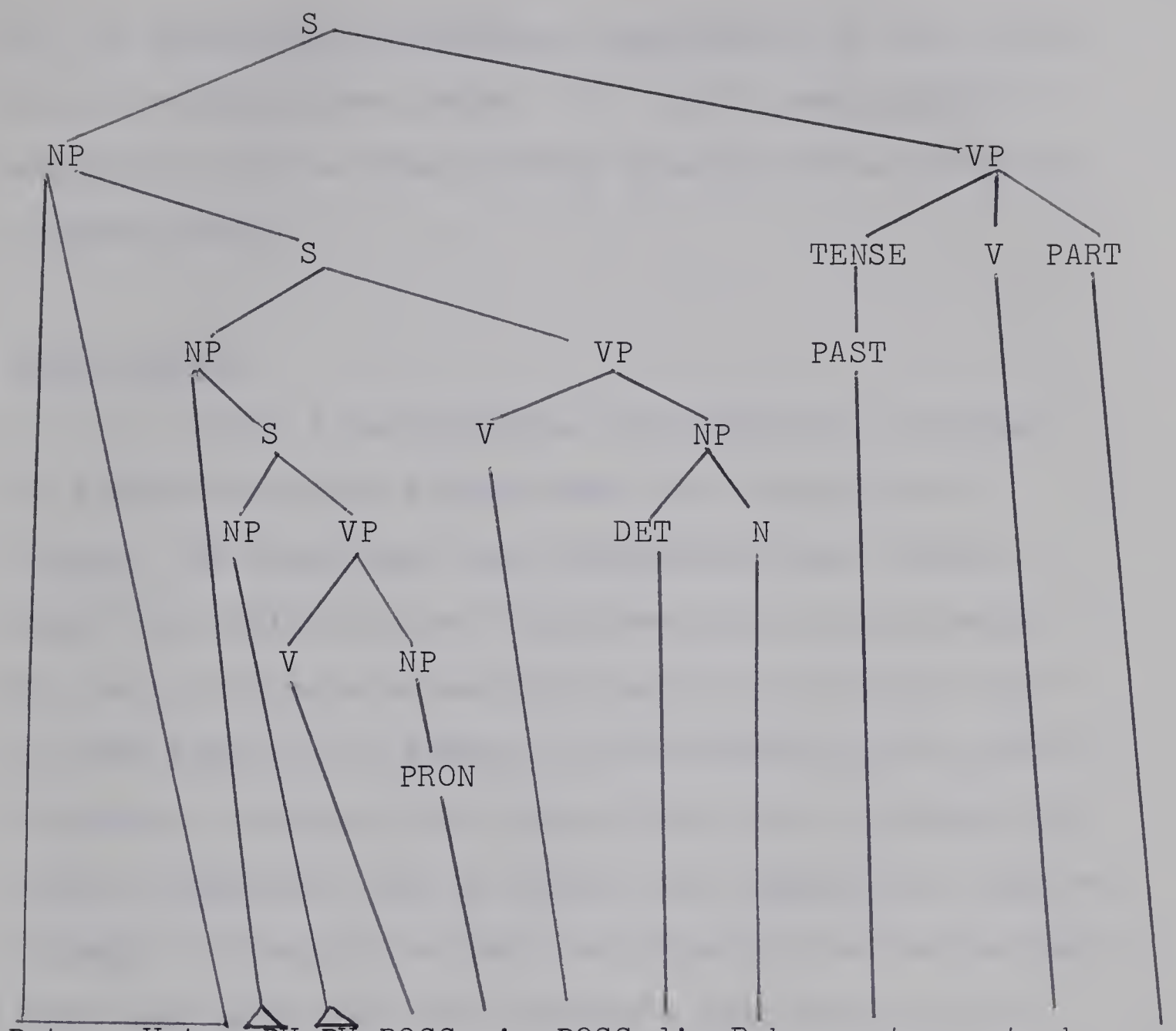
2.5. Some Underlying P-Markers

Sentence (11) is said to have the underlying P-marker represented in Fig. 2. The possessive NP 'Peters Vater' is left unanalyzed. However, we suggest that the possessive relationship underlying this construction be derived from #S# in similar fashion as for dative of possession. The possessive is not being pursued any further since the possessive relationship as such has been well recognized by traditional grammar and requires no further explanation. We do wish to re-emphasize the similarity between this possessive relationship, which happens to display both members of the ordered pair in the surface structure, and the relationship marked POSS in Fig. 2. Further study of the genitive case in German should explore the possibility of complementary distribution between the two possessives.

The node 'POSS' in Fig. 2 is governed in each case by a node 'V' and is followed by an NP which is marked by its position following POSS for a dative transformation. Thus, our revised dative transformation will read,

$$NP \longrightarrow NP_2 \ / \ POSS \ \_\_\_$$

The pre-terminal symbol 'POSS' is never phonetically realized and merely serves two purposes.



Peters Vater sarb uns gestern an der Ruhr

Fig. 2

1. It serves as a structural description of the dative transformation given above. 2. It is semantically expressive of the relationship obtained between the two flanking NP's.

2.6. Adverb

Fig. 2 incorporates the additional proposal of substituting for adverb some other grammatical device. We claim that the information that 'Peters Vater' was afflicted by 'die Ruhr', i.e. possessed by it, is by far more revealing than the contention that 'an der Ruhr' is an adverb, to be attached to the verb 'sterben'. Notice that 'gestern' is also an adverb in such a framework, and it strains the imagination when we attempt to unearth the deep relationship between'an der Ruhr' and 'gestern'. We therefore make the specific claim that such categories as pre-position, ad-verb, ad-nominal, and post-position, which are merely expressive of some position in the sentence with respect to some other category, have no place in a P-marker since they predicate mere surface propositions and usually have nothing else in common by way of deep structure relationships that might serve as a common denominator of a P-marker category.

2.6.1. Alternative Treatment of Adverbials

The precarious position of adverb within the context of the base has been implicity and explicity recognized by transformationalists for a long time. Owan Thomas derives Loc from two sources, MV and Pred[5], and Paul Roberts produces the same result by assigning such expressions as "in the house" and "in the corner" to two different base categories, Adv.-p. and Comp respectively[6], which points out the difficulties so far encountered with this concept. Nevertheless, we hesitate to judge such flaws too severely since our own analysis is saddled with dualistic derivations of major categories. NP, for instance, is rewritten from both S and VP. We suggest that a revision of the theory in terms of sets rather than strings would be capable of at least outlining the inadequacy of such a procedure.

With respect to adverbs of location, we feel that a more fruitful analysis would attach such locatives as 'in the corner', 'in the house' etc. to the NP representing whatever happens to be in these places, e.g. 'the man' if we mean 'the man in the corner', and to derive pro-terms like 'there', 'da', etc. from such expressions by transformations.

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[5] Owan Thomas, Transformational Grammar and the Teacher of English. (1965) 1966, p. 99.

[6] Paul Roberts, English Syntax. 1964, p. 398

As for expressions of time, we have the choice of treating these as ordinary nominal expressions (e.g. 'in zwei Tagen' just like 'in der Ecke', since the former was doubtlessly formed on the analogy of the latter) or, as in Fig. 2, of detaching time expressions from nominals and attaching them to the verb phrase in accordance with our intuition that action is more closely associated with the time continuum than with things. Surely, however, we cannot make this claim universally, as it would doubtlessly expose us to a charge of glosso-centrism.

Manner adverbials are treated just like adjectives by way of an underlying sentence. In German, manner adverbs are not distinguished from adjectives, whereas in English, any adjective that is not derived from a copula sentence receives an adverbial surface marker, usually <u>-ly</u>.

Having decided on VP-domination for time expressions, there seems to be no reason to avoid the attachment of an expression like 'gestern' to the 'PAST'-node as the two concepts form an intimate relationship not only with each other, but also with respect to the tense of the adjoining verb. Thus, the sentence '*Gestern werde ich gehen' is ungrammatical.

2.7. The Verb Particle

We propose that the expression

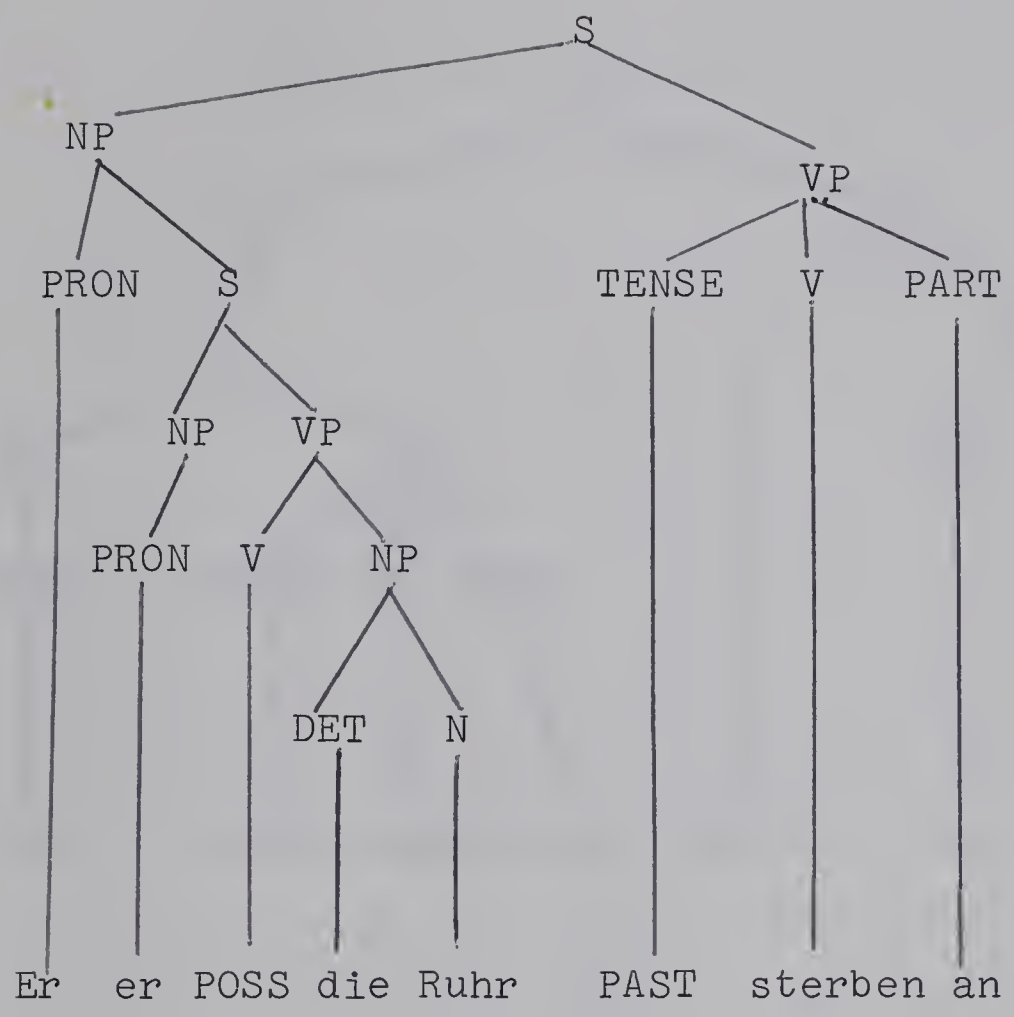
(12) . . . . an der Ruhr sterben

contains the immediate constituents 'der Ruhr' and (discontinuous) 'sterben an'. Traditionally (12) is cut before 'sterben', and our counterclaim could be refuted if it were possible to demonstrate that (12) is a selfcontained expression that is in no need of the deep structure NP complement of its POSS relation. We make such a demonstration impossible by modifying (12) to read

(12a) . . . . an seiner Ruhr sterben

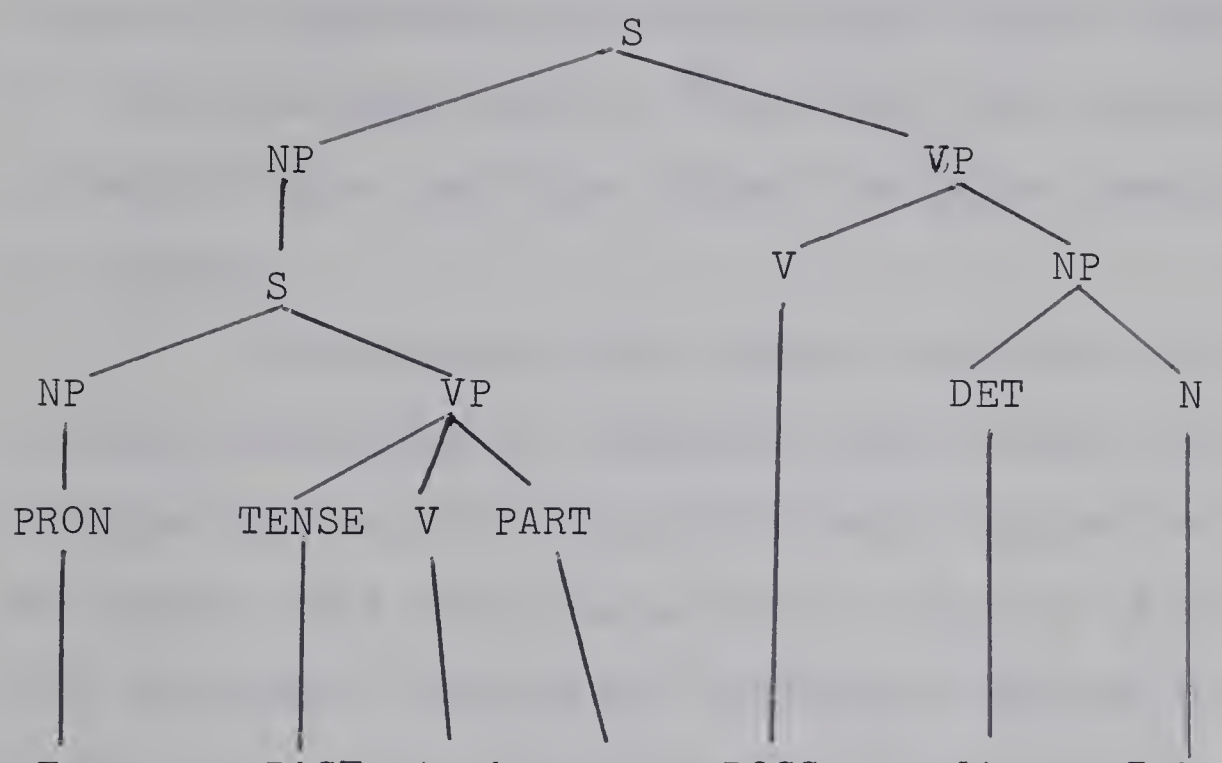
Notice that this additional expression of the possessive relationship only amplifies what has been expressed already, we claim, by the dative in (12).

Furthermore, if we subject the so-called constituents 'an der Ruhr' (disease) and 'an der Ruhr' (river) to a pair test, we would like to claim that the two expressions do not only differ minimally through their homophonous expression 'Ruhr', but that there is a structural difference as well. Figs. 3 and 4 elucidate these structural differences.



Er starb an der Ruhr (disease)

Fig. 3



Er starb an der Ruhr (river)

Fig. 4

Alternatively, if we wish to leave PART under NP-dominance in the base, rather than shifting it there later by transformation, we need to introduce elaborate co-occurrence restrictions between PART and V. Thus, we must exclude '*unter der Ruhr sterben' although 'unter der Ruhr leiden' is quite permissible in German.

Economically most viable would be a listing of those particles in connection with verbal dictionary entries that may not occur with each particular verb. We suggest that such a solution is capable of answering P.H. Matthews' criticism of Chomsky's neglect of exactly these co-occurrence restrictions.[7] Matthews specifically asks why we should not account for the ungrammaticality of such a sentence as '*Place it from a table'. We suggest that 'to place it from . . .' would be excluded from the syntax by subcategorization rules and that the corresponding sentence would be excluded from the grammar in the same way.

2.8. Extending the Domain of the Dative of Possession

Motsch analyzes appositions as reduced copulative sentences under the heading "Appositionen als reduzierte

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[7] P.H. Matthews, "Review: N. Chomsky, Aspects of the Theory of Syntax," Journal of Linguistics 3.131 (1967).

Kopulasaetze".[8] Motsch uses an expansion of the type ⟨A IS B⟩ and drops A if it is identical with the noun of the leading NP. In the case of our adverbial phrase or dative transform, we have the parallel expansion ⟨A POSS B⟩ which we have substituted for the relation A belongs to B. In this latter case, too, A is erased by a recoverable deletion transformation, if it is identical with the noun of the leading NP in the P-marker. But rather than leaving the remaining dative noun or pronoun in NP-trailing position, as is done in the case of appositives and relative clauses, we have to transport our reduced sentence to the position before VE^2, characterized previously as the store position.

Despite Isačenko's protestations, the dative transformation may be extended to all adverbs involving prepositional phrases in the dative case, with some exceptions. Viz.

(13) Der Patient hoerte die Neuigkeit mit Vergnuegen

where ⟨Patient POSS Vergnuegen⟩, which, we might add, represents a different case from that underlying

(14) Der Patient hoerte die Neuigkeit mit seinen Ohren

for which Fillmore's instrumental case would be more

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[8]Motsch, Studia Grammatica V. pp. 88, 89.

appropriate. However, we shall not concern ourselves with this particular case. Other sentences undergoing the dative transformation are the following,

(15) Der Preis ist unter Umstaenden zu hoch

where ⟨Preis POSS Umstaende⟩,

(16) Der Ingenieur hat das Fundament ueber dem Grundwasserspiegel angefunden

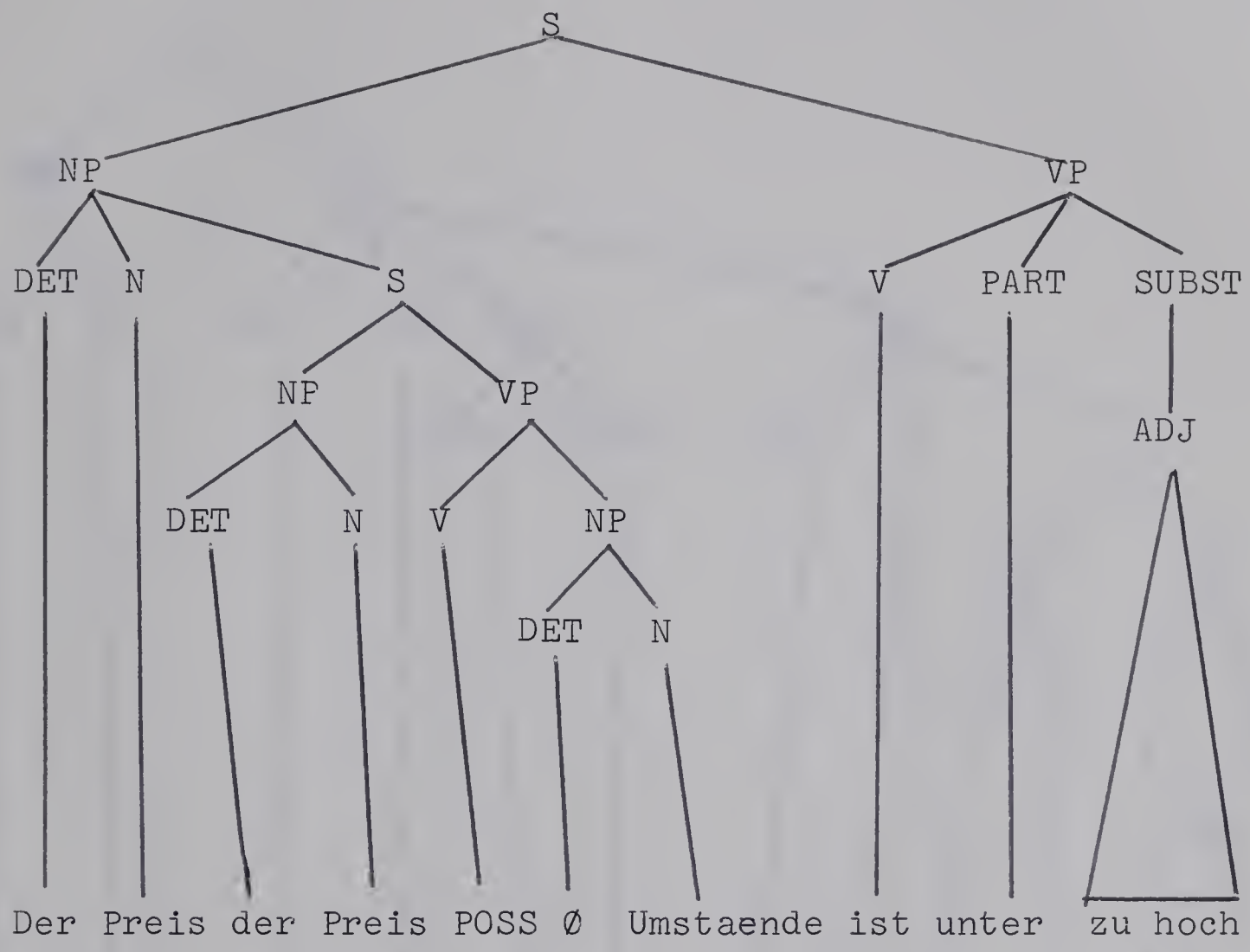
where ⟨Fundament POSS Grundwasserspiegel⟩,

(17) Er hat seine Plaene an der Mosel abgeschlossen

where we may have either ⟨Er hat seine Plaene abgeschlossen an POSS die Mosel⟩ or ⟨Plaene POSS die Mosel⟩.

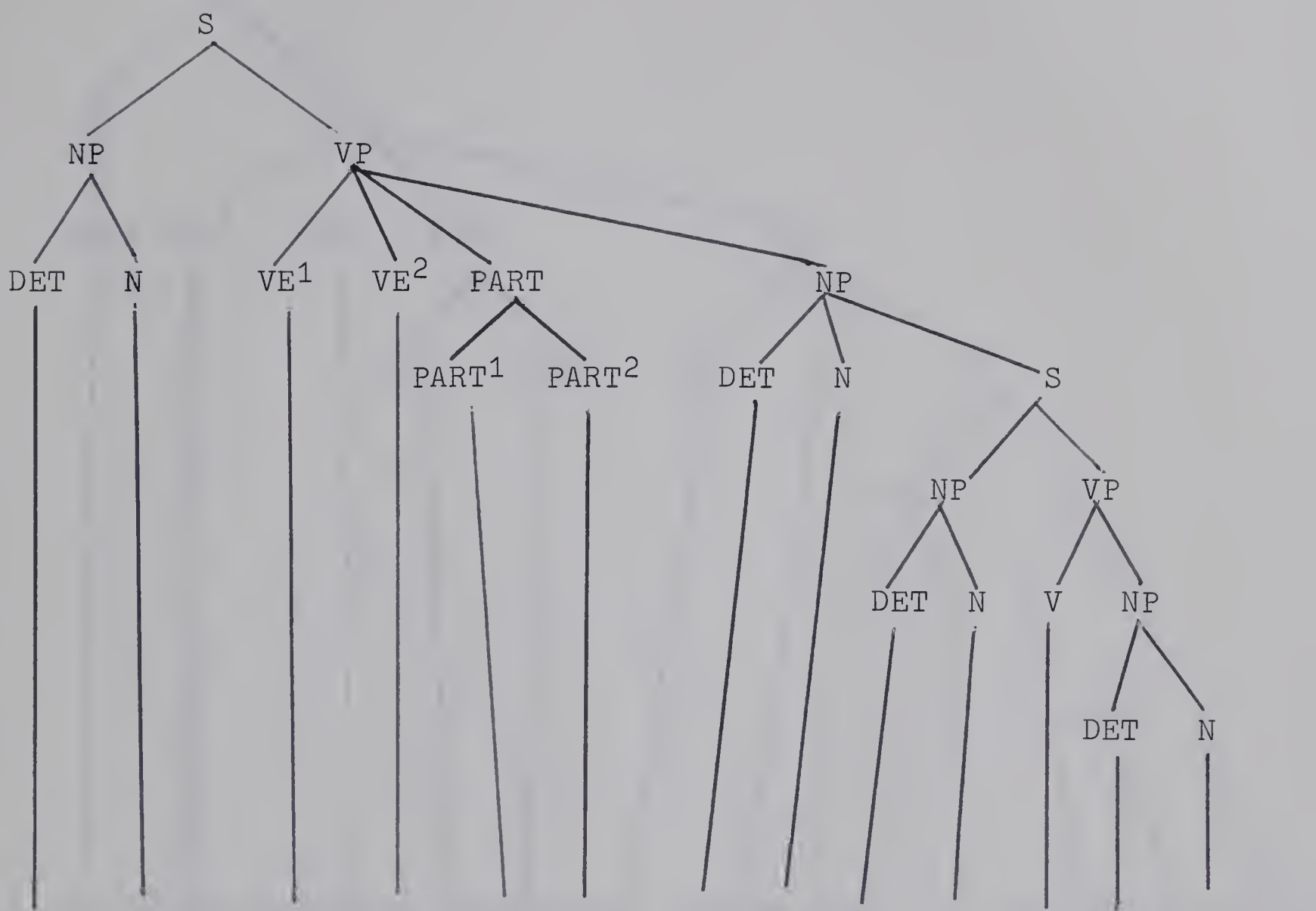
In (15) and Fig. 5, we demonstrate the notion of belongingness in an abstract statement that is far removed from such a concrete concept as body part. Freely translated, the sentence means, 'the price is possibly too high', i.e. possessed of certain circumstances, 'Umstaende', the predicate holds true. The ordered pair of the possessive relationship here is ⟨der Preis POSS Umstaende⟩ and constitutes a part of the subject phrase. Thus, the subject of this sentence is said to comprise an NP which is modified by an S.

In (16) and Fig. 6, we show the operation of the dative of possession in the predicate. Here the object of the sentence, 'das Fundament', is said to belong to the



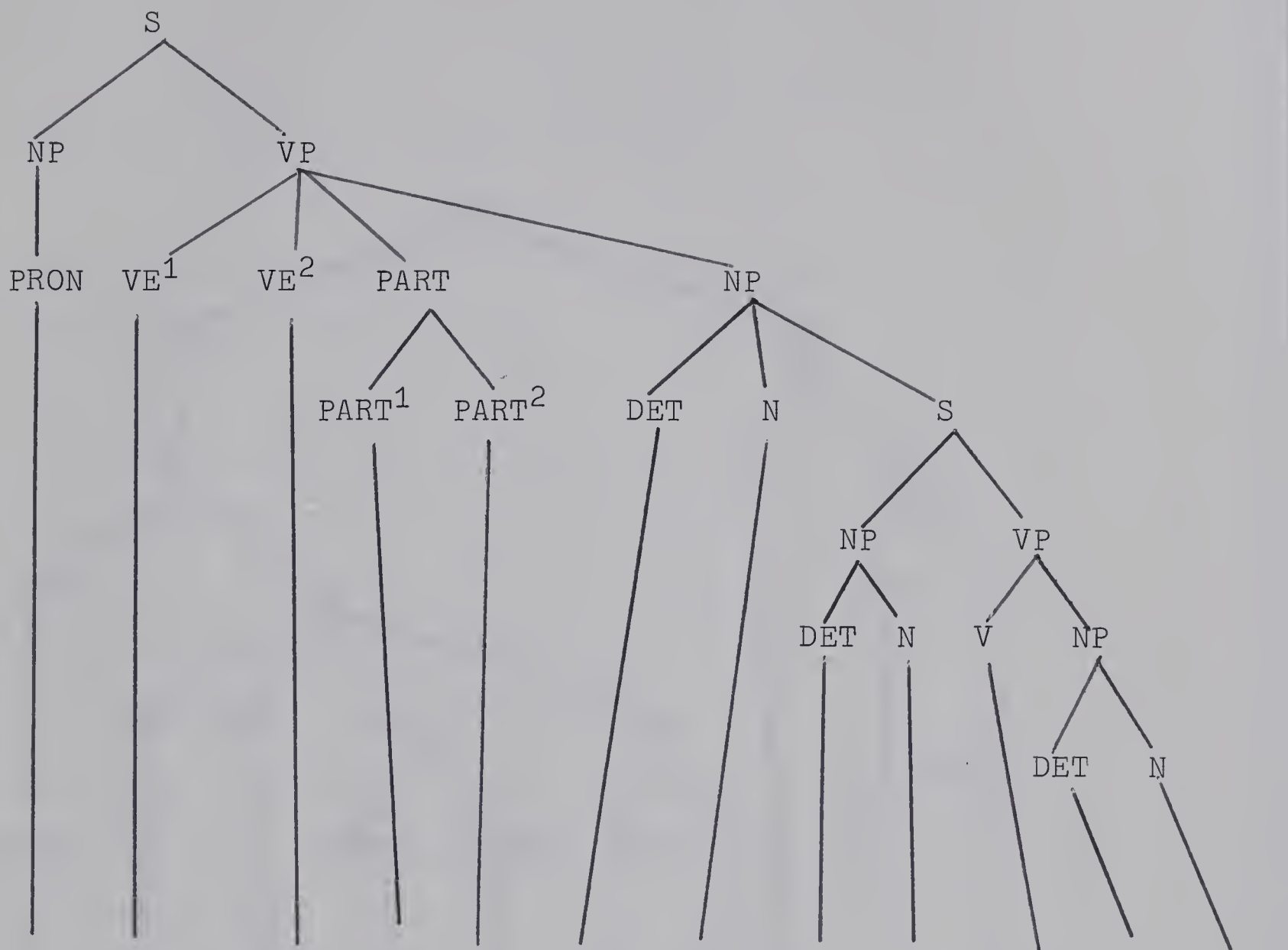
Der Preis ist unter Umstaenden zu hoch

Fig. 5



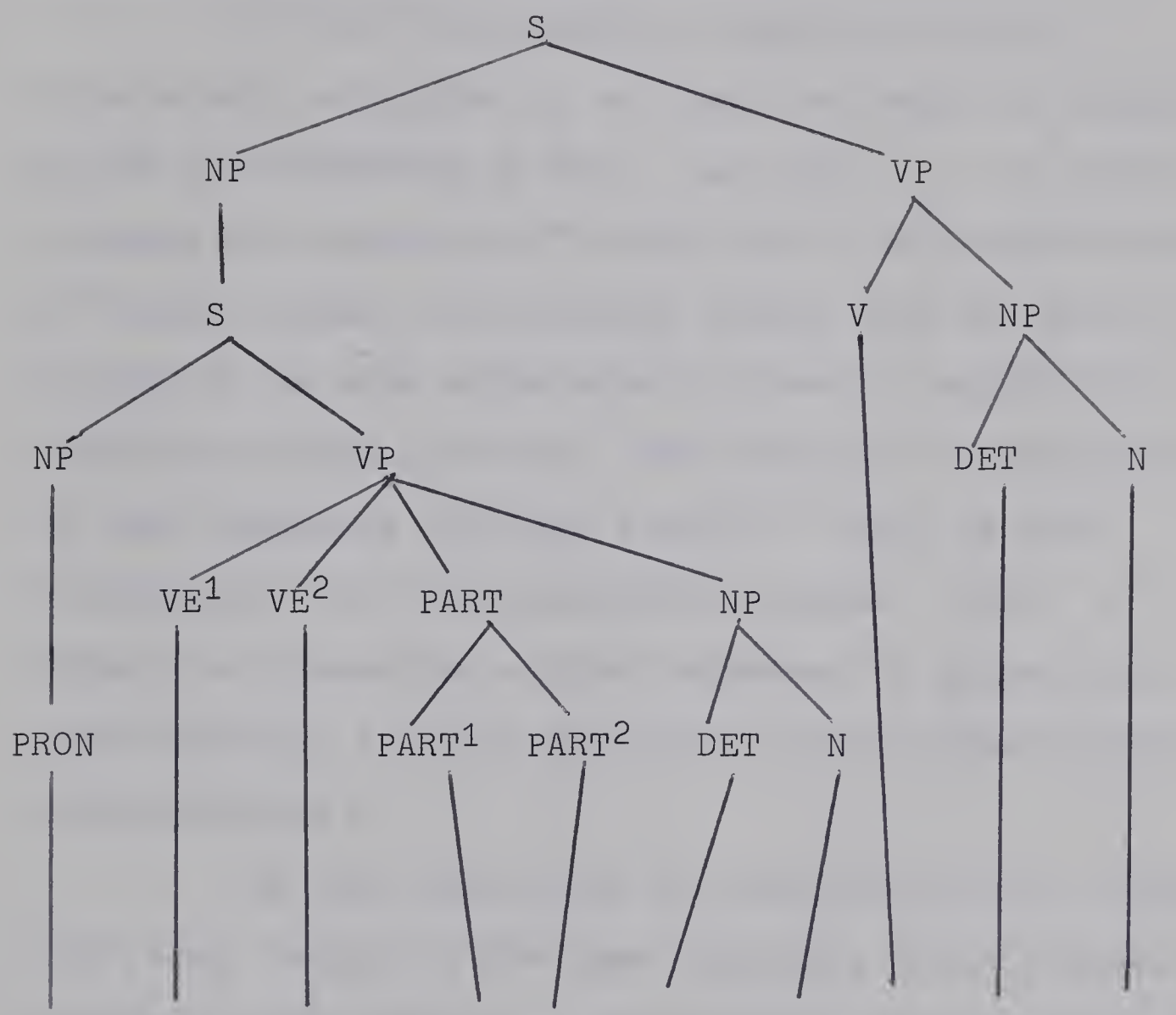
Der Ingenieur hat das Fundament ueber dem Grundwasser-
spiegel angefunden

Fig. 6



Er hat seine Plaene an der Mosel abgeschlossen (welche Plaene?)

Fig. 7



Er hat seine Plaene an der Mosel abgeschlossen (wo?)

Fig. 8

water table, 'Grundwasserspiegel'. The relationship is further modified as a spatial one by the particle 'ueber' meaning 'above'. Formally we obtain ⟨das Fundament POSS der Grundwasserspiegel⟩.

In (17) we selected a sentence that is structurally ambiguous in at least two ways, as traced by the two P-markers in Fig. 7 and Fig. 8. The former analyzes the expression 'an der Mosel' as a modification of 'seine Plaene', i.e. ⟨seine Plaene POSS die Mosel⟩. In Fig. 8 the same expression is shown to modify the entire preceding sentence. The situation is analogous to that portrayed in Figs. 3 and 4. Thus, we have demonstrated that the possessive relation 'POSS' is capable of connecting entire sentences to grammatical constructions, e.g. ⟨(Er hat seine Plaene abgeschlossen an) POSS die Mosel⟩.

We also imply that the particles 'an', 'ueber', 'ab', etc. belong to the same category, their eventual position in the sentence, either in the 'prepositional phrase' or as detachable or non-detachable verb affixes not withstanding. We suggest that these positions are results of surface mechanisms to be regulated by transformations. In practice such transformational rules simply state that the particle with the highest superscript is placed next to the nearest POSS until we run

out of either POSS's or PART's. In the former case the remaining PART's belong to the verb, whereas in the latter case the unmatched POSS's are later realized phonetically as Ø, leaving simple dative objects without 'prepositions' in the string.

2.8.1. Recursiveness

Fig. 2 shows the capacity of the node 'S' underlying our possessive relationship to undergo recursion. The S underlying ⟨Peters Vater POSS wir⟩ is imbedded in ⟨(_____) POSS die Ruhr⟩. A fourth S could be inserted which might be expanded to read

Peters Vater ist^vor ein treuer Diener

formally ⟨Peters Vater IS ein treuer Diener⟩, i.e. an appositive in Motsch's framework. The latter NP, 'ein treuer Diener', (trusty servant) could, in turn, be a take-off point for yet another S, formally ⟨treuer Diener POSS der Herr⟩, which would extend (11) to read

(18) Peters Vater, ein treuer Diener vor dem Herrn,
ist uns gestern an der Ruhr gestorben

CHAPTER III

3.0. Purpose

This chapter adduces syntactic, intuitive, and empirical evidence in support of the analysis given in Chapter II.

3.1. Prepositions Governing Two Cases

Sentences (15) through (18) contain prepositional phrases which may govern both the accusative case and the dative case in German. Thus, the occurrence of the dative case in these sentences is of special significance here. A contrastive analysis of prepositional phrases using either the dative or the accusative case with the same preposition has until now been interpreted as evidence in support of the theory that certain semantic considerations of rest and motion are responsible for particular case selections. Thus, Fehling and Paulsen in an elementary grammar of German list some of the prepositions which we have cited in 1.3.2 and comment,

> the . . . prepositions just listed refer primarily to space relationships. When motion toward an object is expressed, use the accusative. When a stationary relationship or activity in a confined area or in time is expressed, use the dative.[1]

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[1]Fred L. Fehling and Wolfgang Paulsen, Elementary German. (1949) 1957, pp. 77, 78.

In this paper we have imputed the selection of the dative case not to the notion of rest underlying the situation about to be described, but to the more accurate notion of belongingness, e.g.

(19) Das Bild haengt ueber dem Fenster

i.e. the picture belongs there because that is the place where its fixture is fastened to the wall.

3.1.1. Contrastive Analysis

Sentence (19) may be contrasted with

(20) Er haengt das Bild ueber das Fenster

in which 'ueber' governs the accusative in the prepositional phrase. The verb 'haengen' is transitive in (20) and intransitive in (19). Yet the case of the noun 'Fenster' in these examples is traditionally said to be governed by the preposition. Structural grammarians have attempted to overcome the difficulty of two cases being governed by the same preposition by listing the prepositions given in 1.3.2. twice, in effect treating them as two different lists of morphemes.

We maintain that the contrast between (19) and (20) cannot be found in the preposition 'ueber', since whatever meaning can be assigned to this particle is certainly not varied enough to justify an analysis into two morphemes; the situation in English regarding the preposition 'over' seems to be analogous in this respect. Instead it is the whole situation that should be analyzed

for meaning differences, i.e. the relationship obtaining between two NP's and the case selected on the basis of such an analysis. Only after the case selection, we maintain, does the native speaker insert the preposition.

The following pairs of sentences are selected from Fehling and Paulsen[2],

(21) Er steigt auf das Pferd	(21a) Er sitzt auf dem Pferd
(22) Er kriecht under das Auto	(22a) Er liegt unter dem Auto
(23) Er geht unter die Leute	(23a) Er lebt unter den Leuten
(24) Er stellt die Milch vor die Tuer	(24a) Er steht vor der Tuer

Notice that the verbs of the sentences of the left-hand column may be marked [-stative] and those of the right-hand column [+stative.][3] Also common to the left-hand column is the notion of movement and very casual association. At the time of the action referred to in the VP, the paired NP's are, as it were, strangers. The situations in the right-hand column contrast to this by having a more stationary or fixed bond connecting the paired NP's. We have named this relationship POSS and

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[2]Ibid. p. 78.

[3]cf. George Lakoff, "Stative Adjectives and Verbs in English," NSF 17.

wish to give it more prominence by contrasting it with what we will call the accusative of transition underlying the ordered pair⟨NP TRANS NP⟩.

The contrast is most striking in the pair (23) vs. (23a). The subject's attachment to the NP 'Leute' (people) in (23a) is actually amplified by removing the particle, e.g.

(25) Er lebt den Leuten

or 'Er lebt der Kunst'.

We have now established a three-way contrast, i.e. preposition with accusative, the same preposition with dative, and the same dative without any preposition at all. Another example of a contrast between presence and absence of preposition is

(26) Die Nachricht ist fuer den Patienten wichtig 'The news is important for the patient'. This sentence does not definitely indicate that the patient knows the news. Actually the news is still in transmission at the time of the statement. If we wish to show that the patient is actually possessed by the feeling of the importance of the news, as opposed to someone else's evaluation of the significance, we may formulate the sentence

(27) Die Nachricht ist dem Patienten wichtig

which differs from (26) merely by the absence of 'fuer' (for). Notice however that the contrast is neutralized if we substitute 'mich/mir', i.e. first person singular for 'Patient' since in that case we are not making a symbolic statement, but a deictic one. In the latter case the subject, 'I', must be aware of the action referred to in the predicate, since I am the one who is talking about it, putting it into the here and now, irrespective of the dative or accusative used in the sentence.[4]

3.2. Expansion with 'es'

The dative of possession described so far applies only to two NP's that may be arranged in an ordered pair as denoted by the expression ⟨NP POSS NP⟩. In the sentences numbered (19), (21a), (22a), (23a), (24a), (25), and (27), the surface structures separate the first NP from the second NP by verbs like 'sitzt', 'liegt', etc. all of which deviate from our pseudo verb 'POSS'. In the underlying form we must therefore either separate the first NP from subject position, or bring the second NP into subject position. German surface structures permit a shift like the former by substituting

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[4] Regarding deixis in the sense used here see M. Mathiot, Language 43.714 (1967).

the first NP, in subject position, with a pro-term, 'es'. The relevant T-rule could be written in the old framework for (19) e.g. (Das Bild haengt ueber dem Fenster ⟶)

(28) Es haengt das Bild ueber dem Fenster

T-OPT: NP VP PREP^NP

1 2 3 ⟶ es, 2, 1, 3

We observe that, since the transform of (19) is a paraphrase of the original sentence, and since it brings the two NP's into closer contact, it is closer to our proposed deep structure than (19) itself.

However, there seems to be a more viable solution to this problem in the suggested alternative shift of the second NP into subject position. Such a solution would yield the P-marker reproduced in Fig. 9. The transformation responsible for ordering the elements into the proper surface structure reads,

T: $\underline{(\text{Det}\,\hat{}\,\text{N}\setminus\text{NP})\setminus\text{S})}\,\hat{}\,\underline{\text{S}}\,\hat{}\,\underline{\text{VP}}$

1 2 3 1, 3, 2

This transformation operates after the deepest imbedded S has been expanded,[5] e.g. ⟨Das Bild POSS das Fenster⟩,

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[5] Parentheses do not mark optional elements. They merely delimit an argument on either side of an operator, which may be a catenation symbol, ^, etc. An optional element 'X' is marked $\left\{\begin{matrix}\text{X}\\ \emptyset\end{matrix}\right\}$.

T1: NP $\longrightarrow$ NP_2 / POSS _____ (Dative)

T2: PART $\longrightarrow$ $\emptyset$ $\longrightarrow$ PART / POSS _____ (Shift of PART)

If we now wish to derive the 'es' sentence variant, we do this according to the model as outlined in Chomsky's Aspects of the Theory of Syntax by obligatory transformations that are signalled in the base, e.g.

das Bild das Bild POSS das Fenster haengt ueber^{ES} $\longrightarrow$

1 2 3

es, 3, 1, 2,

where 2, representing the deepest imbedded sentence, has to be expanded first.

Care must be taken not to confuse this sentence with the construction of

(29) Es ist mir recht

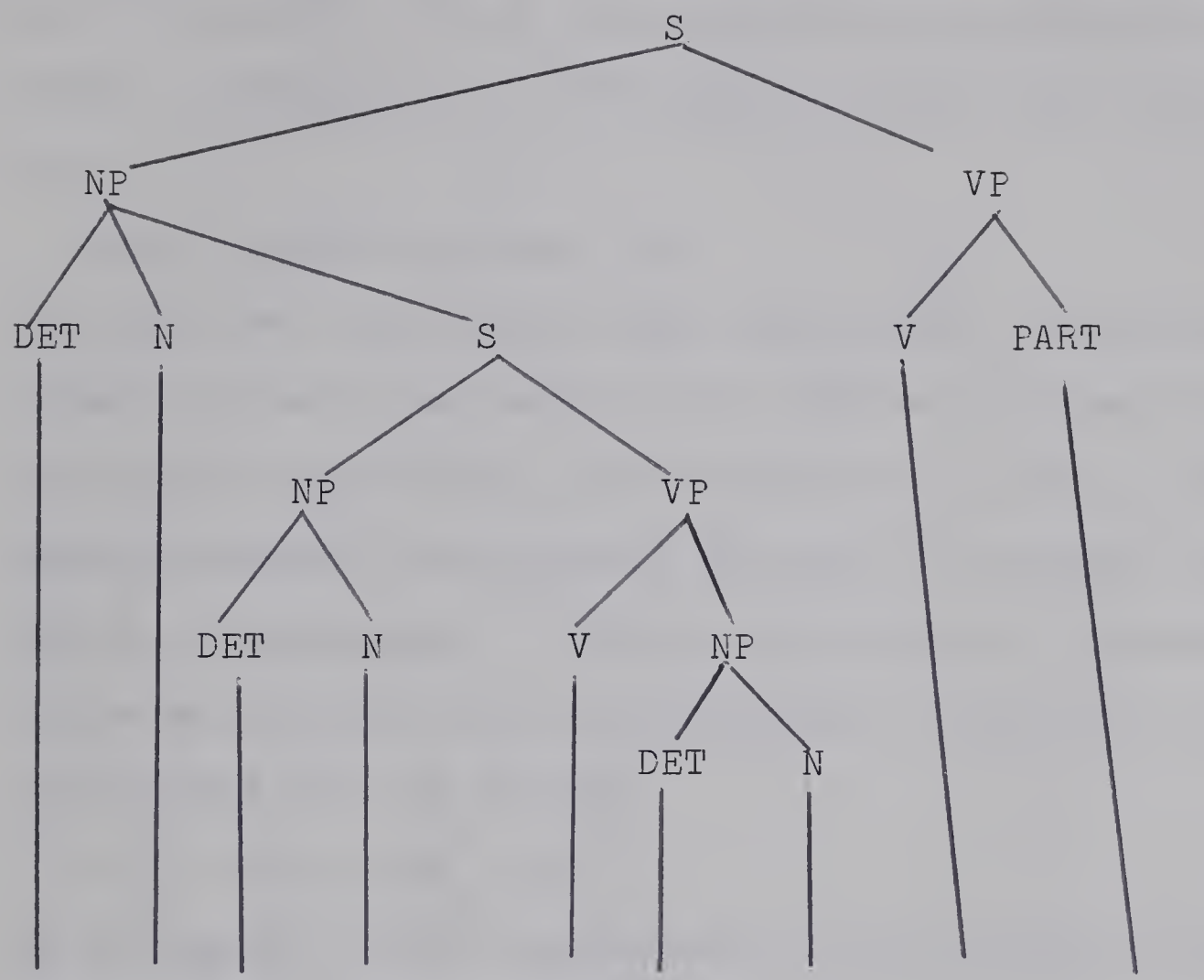
(it is alright with me) where 'es' is not a pseudo-subject, but a real one, as revealed by the underlying structure represented in the P-marker for Fig. 10.

3.3. Other Types of Government

One of the most obvious counter-arguments against our analysis of dative of possession may be anticipated in form of the following. Since the sentence

(30) Er besitzt das Haus

(he possesses the house) clearly expresses a possessive



Das Bild haengt ueber dem Fenster

Fig. 9

relationship between subject and object, the question may be asked as to why there is no dative case governing one of the NP's. It is noteworthy that we are able to create a paraphrase of (30) which exhibits this feature, e.g.

(31) Das Haus gehoert ihm

but this does not explain much about (30). Therefore, we must delimit the domain of our dative of possession by non-notional devices and say that it is not any and every possessive relationship that may be analyzed as a dative of possession. Instead, we introduce a grammatical device which calls for the accusative in (30) by a transformational rule as follows,

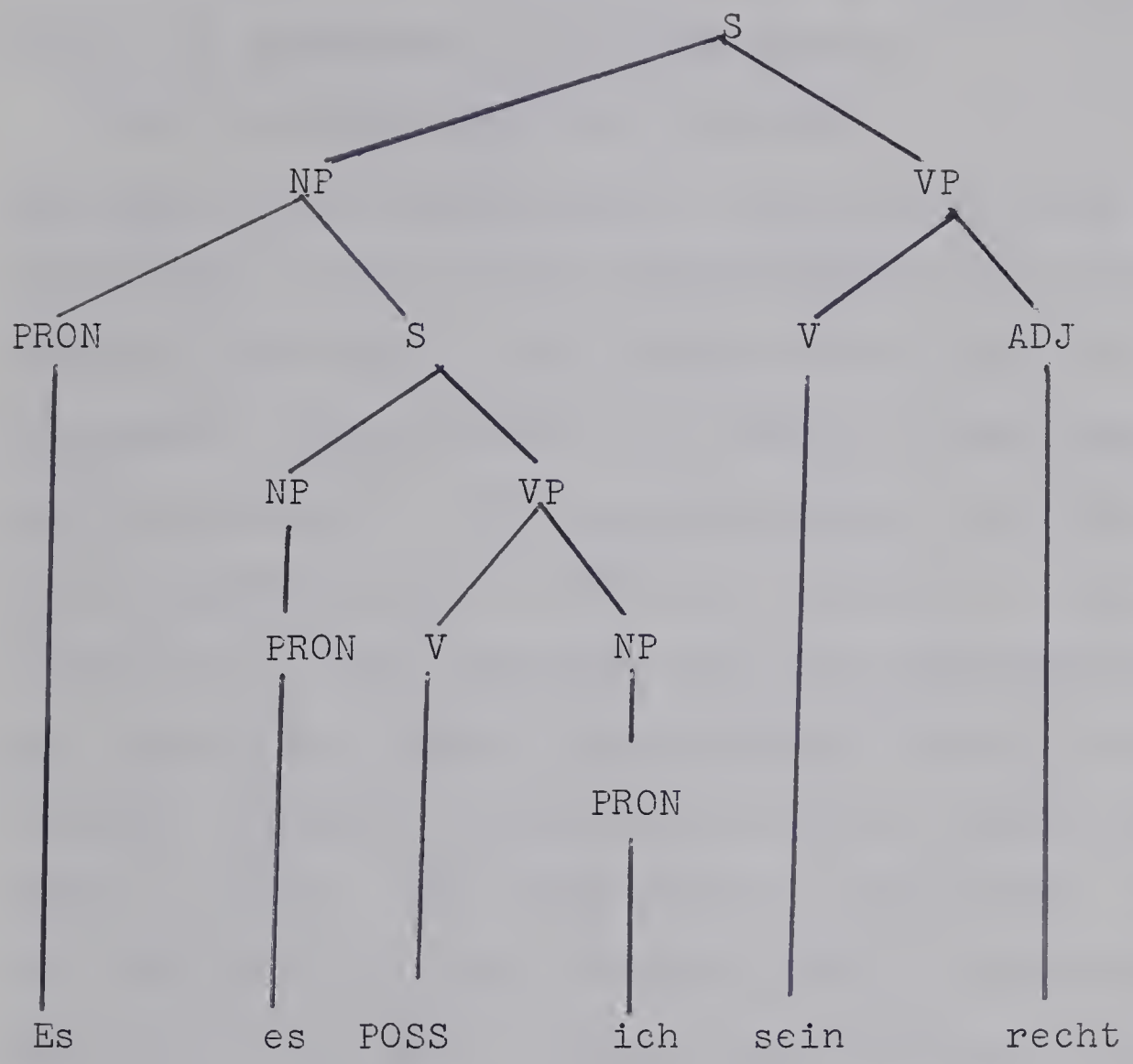
T: $NP\ /\ \longrightarrow\ NP_1 \setminus VP$

which compares to the transformation that selects the nominative for subject NP's, e.g.

T: $NP \longrightarrow NP_0 \setminus S$

Both of these transformations must apply after all dative transformations of the form $NP \longrightarrow NP_2$ / POSS ____ have been carried out.

Certain particles do override the case selection effected by the dative transformation after POSS. The traditional grammars list 'durch', 'fuer', 'gegen', 'ohne', 'um', and 'wider' as prepositions governing the accusative.



Es ist mir recht

Fig. 10

Semantically these particles lean more toward the notion of transition than possession. Still, it is possible to substitute one of them for PART in connection with a dative of possession, as in the case of

(32) Er starb fuer das Vaterland

(He died for his fatherland). In order to avoid the application of the dative transformation we attach the feature [-dative] to these particles so that the accusative transformation NP $\longrightarrow$ $NP_1 \setminus VP$ may subsequently apply by default. For the same reason, the PART shift to the position next to POSS must precede the case transformations so that particles with the [-dative] feature may suspend the dative transformation before it has had a chance to apply. Notice also that we cannot permit PART to replace POSS since POSS is subsequently needed for the structure index of those dative transformations that are not blocked. Only at the end does a phonological rule replace POSS by null, e.g.

T: POSS $\longrightarrow$ $\emptyset$

3.4. Surface Case

Once an NP has been subscripted by a case marker, all members of this NP are given the same case in German. We suggest acceptance of Chomsky's proposal

regarding case marking of articles despite his treatment of case as surface phenomenon,

$$\text{Article} \longrightarrow \begin{bmatrix} \alpha\ \text{Gender} \\ \beta\ \text{Number} \\ \gamma\ \text{Case} \end{bmatrix} \Big/ \_\_ \ \ldots \ \begin{bmatrix} +\text{N} \\ \alpha\ \text{Gender} \\ \beta\ \text{Number} \\ \gamma\ \text{Case} \end{bmatrix} \quad 6$$

where α, β, γ range over the integers 0 to 3, and the square brackets enclose a feature complex of some syntactic unit, or morpheme. Chomsky adds the condition, "where Article ... N is an NP." Notice that our proposed convention '\ NP' would express the same condition in a more concise manner.

However, there is another part of this rule that we find somewhat encumbered with repetition, to wit, the rule must be repeated for each element of the NP separately, and we feel that such housekeeping could be simplified if we analyzed NP not in terms of its lower categories, but in terms of parameters -- as we have in fact done with VE's and PART's in Chapter II. A parameter is a name used in a transformation to represent the meaning of another name which is contextually passed on to that

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[6] A.N. Chomsky, Aspects of the Theory of Syntax. 1965, pp. 175, 177. Chomsky states, "... since case often depends on aspects of surface rather than deep structure ..."

transformation for purposes of structural change.[7] Parameters are being used in rules of the type

T: A B C

1 2 3 ⟶ 2, 3, 1,

where 1, 2, and 3 are names that represent A, B, and C respectively. The transformation itself consists only of the line containing the arrow, to which the names of A B, C are passed on contextually. We wish to extend this device in conjunction with our 'dominating' node convention '\', e.g. for question transformation as follows,

T: (1, 2) \ S ⟶ 2, 1 (cf. T-Q in the Appendix).

Example: Er kommt ⟶ Kommt er? (He comes. Does he come?)

or for case agreement in an NP,

T: (1, 2, . . ., n) \ NP_{γ} ⟶ 1_{γ} , 2_{γ} , . . ., n_{γ}

where γ ranges over the case subscripts 0 to 3. Notice, however, that this is a transformational device which has no proper place in a source P-marker. We must, therefore, withdraw all subscripted elements from our P-marker proper as being mere demonstrational devices that indicate the point of subsequent transformations utilizing the parameters. However, the usefulness and

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[7] This definition was adapted from one concerned with an IBM-programming language, I.B.M. A PL/I Primer, p. 47.

generality of the device should be apparent if we consider for instance our 'store-rule' which switches the imbedded dative of possession as dominated by S into position preceding VE[2] (cf. Fig. 1).

We may now restate the T-rule represented in Fig. 1 more generally as follows:

$$T: \begin{bmatrix} S \setminus NP \\ NP \setminus \begin{Bmatrix} S \\ VP \end{Bmatrix} \\ TENSE \end{bmatrix} \longrightarrow \emptyset \longrightarrow \begin{bmatrix} S \\ NP \\ TENSE \end{bmatrix} / (1 \_\_\_ 2, \ldots, n) \setminus VP$$

The rule states that either an S dominated by an NP or an NP dominated by S or VP, or a tense marker (which may be substituted by a lexical item like 'immer' (always) later on) is erased at some unspecified place in the P-marker and rewritten as the same element after the first element of the VP. This rule conflates four rules which we will call

1. S-rule
2. NP-rule
3. Object-rule
4. Tense-rule

In the following, we give one example for each,

1. Peters Vater#uns#wird gestorben sein ⟶
   Peters Vater wird uns gestorben sein

2. Sie sind verrueckt geworden

   Sind Sie verrueckt geworden?

3. Er haette definieren sollen die Regel

   Er haette die Regel definieren sollen

4. Der Patient immer sollte beobachtet worden sein

   Der Patient sollte immer beobachtet worden sein[8]

The rules work quite efficiently without positing a dependent word order for deep structure in German as is done by Bach and Bierwisch.[9]

3.5. Intuitive Interpretations

The next discussion treats some of Isačenko's objections to a more general interpretation of the dative of possession. He rejects the analysis in the case of 'mir' in the sentence

(33) Peter zerbrach mir die Vase

as a transform of

(33a) Peter zerbrach meine Vase

as inapplicable since we may also have

(33b) Peter zerbrach mir Mutters Vase[10]

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[8] We do not suggest that passive be introduced as a separate P-marker rather than as a transform. The rule simply applies after T-Pass has been carried out.

[9] Emmon Bach, Language 38.266 (1962)
Manfred Bierwisch, Grammatik des Deutschen Verbs. 1963, p. 34.

[10] Alexander Isačenko, "Das Syntaktische Verhaeltnis der Beziehungen von Koerperteilen im Deutschen," 1965, p. 24.

where his theory excludes the possibility of prefacing 'Mutters Vase' by 'meine' in the underlying structure, as we have seen in 2.4. But obviously there is no objection to the interpretation 'Mutters Vase gehoert zu mir', (Mother's vase belongs to me), formally < Mutters Vase POSS ich >. We suggest that such an analysis was just below the threshold when Isačenko produced one instance after another of dative constructions, although always qualifying them as in the following series of quotes, e.g. "kann unter keinen Umstaenden als Dativ-Transformationen ... gelten,"[11] or "Die Deutung des Dativs als Dativus Possessivus kommt in diesem Falle wohl nicht in Frage,"[12] "... kann die Dativ-Transformationen nicht erfolgen..."[13] "... nicht als Ergebnis der Dativ-Transformationen interpretieren zu muessen."[14] "...kann die Dativform mir nicht mehr auf ein Possessivpronomen zurueckgefuehrt werden."[15] A supposedly false

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[11]Ibid. p. 20.

[12]Ibid. p. 21.

[13]Ibid. p. 22.

[14]Ibid. p. 24.

[15]Ibid.

analysis that has to be subdued by the analyst five times in short succession obviously betrays more of his latent linguistic intuition than his ostensible assignment of linguistic insights to traditional grammar.[16]

If we take the sentence

(34) Mir ist Peters Schluessel ins Wasser gefallen (I dropped Peter's key into the water), we can easily demonstrate that 'Peters Schluessel' belonged to 'mir' at the time of the dropping incident, i.e. ⟨ Peters Schluessel POSS ich⟩ . Otherwise the speaker would have said,

(34a) Ich habe Peters Schluessel ins Wasser fallen lassen

Notice that in (34a) the dative case has vanished. In 3.6. we describe a test in which 'mir' is clearly identified with the notion of possession by a 2:1 majority of native speakers of German. Supposing now that we wish to shift the focus of attention in (34) to 'Wasser', then we should construct a sentence around the situation

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[16] Ibid. p. 20.

〈Peters Schluessel POSS Wasser〉, e.g.

(34b) Peters Schluessel ist im Wasser gelandet (Peter's key landed in the water). In (34b) 'Wasser' receives primary stress. Notice that the focus cannot be on 'mir' and on 'Wasser' at the same time, just as we intuitively avoid assigning two primary stresses to a short sentence like *'Mír ist Peters Schluessel im Wasser gelanded'. We investigate the grammaticality of (34) by analyzing the possessive relationships as layered relationships of the pattern 〈〈A POSS B〉 POSS C〉 e.g. 〈〈Der Schluessel POSS ich〉 POSS Wasser〉.

3.6. An Empirical Approach

The significance of the dative of possession as a relationship of belonging may be demonstrated in the following set of sentences,

(35) Mir ist dieser Dachziegel beim Fall zerbrochen

(35a) Dieser Dachziegel ist bei meinem Fall zerbrochen (This roof-shingle broke during my fall).

A test has been devised to match the two sentences with the following situations, A and B. In situation A the speaker of the sentence had been walking on the roof and had broken a shingle when he slipped and fell on top of it. In situation B the speaker had been

carrying a load of shingles on his shoulder and had broken one when he stumbled and fell with it. It was hypothesized that, provided the speaker is not holding the fragments at the time of the utterance, situation B would be aligned with sentence (35) by a significant majority of native speakers of German. The prediction was based on the possessive relationship obtaining between the carrier of the shingles and his load, missing in situation A.

The proviso was necessary because of the contamination that would occur in the grammatical situation if the speaker were permitted to hold the shingle fragments for any length of time prior to his utterance. In such a case a possessive relationship that did not previously exist might creep in while he is holding the fragments, again creating the condition ⟨Dachziegel POSS ich⟩ which would permit the utterance of the first sentence, (35), even if the speaker had had no prior claim to the shingle. The hypothesis was borne out in a test carried out on 200 native speakers of German in Oldenburg, Germany, by the Writer's sister, Miss Sybille Kottke.

CHAPTER IV

4.0. Purpose

This chapter concludes this paper with a critical review of the generative theory.

4.1. Adequacy and Evaluation

Most generative grammarians agree that language must be studied in terms of a meta-theory as propounded by Chomsky and his collaborators, and that a particular language analysis must be evaluated in terms of principles derived from such a meta-theory. Little, however, has been spelled out about such a meta-theory so far, and whatever has been published on this topic, reveals a highly metaphysical trend. It is therefore our aim to justify our particular analysis of the German dative of possession without too heavy reliance on meta-theoretical considerations.

One of the most salient features of generative theory is its mentalistic character. A brief check of our procedures reveals that mentalistic concepts have been utilized throughout. In view of the tremendous mass of unanalyzed primary language data confronting the linguist, we felt justified in availing ourselves of the

advantages available in the heuristics of mentalism. On the other hand, we do not wish to confuse our mentalistic model with such realities as the language acquisition device. Mentalism in this paper remains a stepping stone to more rigorous scientific procedure. Also any ignorance revealed in these pages reflects the writer's honest lack of knowledge rather than the fact that he has not bothered to rediscover what he has known all along about language in the Humboldtian sense.

Within the framework of the meta-theory, the terms of simplicity and descriptive adequacy are technical names that must not be confused with the layman's conception of these terms. Thus, if we make the claim that the model presented in chapters two and three is descriptively adequate, without committing ourselves to all principled considerations of the meta-theory, we simply mean that, given the present state of our knowledge, we could not conceive of a better model. However, should a better model be presented by others, we suggest that our present model be compared to it as a unit, according to Halle's condition four as mentioned in 1.2., rather than contrasted part-for-part by some legendary meta-principles of simplicity or explanatory adequacy, for such would implicitly constitute the

mechanistic discovery procedure so ardently rejected by transformational theorists. No single device of our theory, be it the rewrite method or a particular inherent feature, seems to be immune from obsolescence. To interpret the meta-theory as something else removes our theoretical framework from the realm of science and puts it back into the pre-seventeenth century domain of speculative philosophy or religion.

4.2. Relativity

We hope to have shown that it is possible to utilize the transformational framework without committing ourselves to the meta-theory. Although Chomsky has pointed out the dangers that beset the analyst who confuses categories and relations in syntactic theory, as, for instance, a subject of a sentence and a noun phrase, it is often overlooked that these latter notions are only a level removed from the former by virtue of the fact that they are creatures of (i.e. relevant to,) the theory. That theory, however, for which the claim is made that it exists independent of, or prior to, its discovery or formulation by the human agency is a fiction, the maintenance of which has engaged many a capable investigator in linguistics but which is denied any space in these pages.

The theory expounded here remains a product of human invention. No matter what editorial effort is expended on this product, it remains fictitious nevertheless and will be superceded in time by a better one in terms of consistency and plausibility. But whatever theoretical framework happens to be adhered to by an investigator, it should not be his duty to set the evaluation criteria of the theory as he forges ahead with a particular language model. Common sense dictates the separation of the agencies that execute and those that judge language analyses.

4.3. Conclusion

In conclusion, we hope to have demonstrated the usefulness of transformational grammar in the study of syntax, as well as the need for a theoretical framework on which one may tacitly rely when details of exposition are negligible, or when the encompassing theory is not of direct concern in a particular language problem. The full meaning of the presentation, of course, depends on the supporting framework, and the following discussion concerns the question of universal categories vs. mnemonic devices in syntactic theory. Such a study can be presented only in outline, yet one detail deserves

particular attention. In support of the universalistic position one may cite the evidence found in pidgins where the possessive relationship is often expressed as A belongs B, e.g. in Beach -la-Mar, "What for you put diss belonga master in fire?" or "What for wipe hands belonga you on clothes belonga essespoon?"[1] Considering the circumstances surrounding the creation of a pidgin, some of which are formed overnight, it is revealing to note how the pidgin speaker circumlocutes possessive relationships expressed in English and German by their respective case systems that are foreign to him. The examples show that he not only is capable of expanding the possessive idea into a skeleton sentence, but that he does so not only for body parts, as is the case in Isačenko's article cited in 2.2., but for other objects as well.

The parallelism between English and German in the case of the dative of possession is also noteworthy. In German we may consider all such cases as fashioned on the model 'Es gehoert ihm' (It belongs to him), which finds its reflex in English with dative case, it seems, intact. We are therefore tempted to enter the notion of belonging into a universal category.

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[1]Bloomfield, Language. (1933) 1956, p. 472.

Whether such a step would be meaningful is doubtful. We have seen that the case system of German is of central importance to our discussion, whereas it is potentially absent in some Chinese dialects. The balance of ideas and conceptualizations that persist across cultural boundaries is of extra-linguistic import and may enter into comparative studies only at a very abstract level. When we attempt to come to empirical grips with these commonalities, we usually end up with meta-linguistic references to the physical universe, which, we assume complacently, is the same for any speaker of whatever language. Aside from the fact that such observations would be trivial, they seem to be highly inaccurate as well, since our abstract symbols as used in this paper are defined by the total context of the grammar or theory. Their absolute or meaningful reference to some language universal outside the presented theory is incongruous with this conception.

APPENDIX

A Skeleton Grammar of German

PS-Rules

$$S \longrightarrow NP \hat{} VP$$

$$NP \longrightarrow \begin{Bmatrix} NP \\ \emptyset \end{Bmatrix} \left\{ \begin{Bmatrix} S \\ \emptyset \end{Bmatrix} \quad Det \hat{} N \begin{Bmatrix} PL \\ \emptyset \end{Bmatrix} \begin{Bmatrix} S \\ \emptyset \end{Bmatrix} \right\}$$

$$\begin{matrix} PRON \\ S \end{matrix}$$

$N \longrightarrow$ Peter, Mosel, Ruhr, Preis, Leben, ...

$PRON \longrightarrow$ er, wir, ich, man, ...

$$DET \longrightarrow \begin{Bmatrix} ART \\ DEMON \end{Bmatrix}$$

$$ART \longrightarrow \begin{Bmatrix} DEF \\ NONDEF \end{Bmatrix}$$

$$DEMON \longrightarrow \begin{Bmatrix} D1 \\ D2 \end{Bmatrix}$$

$DEF \longrightarrow$ de

$NONDEF \longrightarrow$ ein

$D1 \longrightarrow$ dies

$D2 \longrightarrow$ jen

$$VP \longrightarrow AUX \hat{} MV \begin{Bmatrix} SUBST \\ \emptyset \end{Bmatrix}$$

$$AUX \longrightarrow TENSE \begin{Bmatrix} MODAL \\ \emptyset \end{Bmatrix} \quad \begin{Bmatrix} haben \hat{} ge \\ \emptyset \end{Bmatrix}$$

$$MV \longrightarrow V \begin{Bmatrix} PART \\ \emptyset \end{Bmatrix}$$

TENSE ⟶ { PAST / PRES / FUT }

MODAL ⟶ wollen, sollen, muessen, ...

SUBST ⟶ { ADJ / NP }

PART ⟶ { PART / Ø } { an / auf / ueber / ..... }

V ⟶ sein, sterben, hoeren, POSS, TRANS, IS, ...

ADJ ⟶ { ADJ / Ø } { gruen / krank / blind / ..... }

FUT ⟶ morgen, uebermorgen, ... , Ø

PRES ⟶ heute, jetzt, ..., Ø

PAST ⟶ gestern, vorhin, ... , Ø

T-Rules

T-Gen: $NP \longrightarrow NP_3/Gen \_\_\_$

T-Dat: $NP \longrightarrow NP_2/Poss \_\_\_$

T-Acc: $NP \longrightarrow NP_1 \backslash VP$

T-Nom: $NP \longrightarrow NP_0 \backslash S$

T-Part: $PART \longrightarrow \emptyset \longrightarrow PART \,/\, \left\{\begin{matrix} POSS \\ TRANS \end{matrix}\right\} \_\_\_$

T-Prop: $Det \longrightarrow \emptyset \,/\, \_\_\_ \left\langle \begin{matrix} +N \\ +\ PROP \end{matrix} \right\rangle$

T-Del: $\begin{matrix} NP \\ | \\ N^1 \end{matrix} \longrightarrow \emptyset \backslash S \backslash \begin{matrix} NP \\ | \\ N^1 \end{matrix} \,/\, \_\_\_ \left\{\begin{matrix} POSS \\ TRANS \end{matrix}\right\}$

T-Es: $(1, 2) \backslash S \longrightarrow es, 2, 1$

T-GE: $ge \hat{} X \longrightarrow geX$

T-Tense: 1. $\emptyset \longrightarrow werden/FUT \_\_\_$

2. $\left\{\begin{matrix} PRES \\ PAST \\ A \end{matrix}\right\}, 1, 2, \ldots, n \backslash VP \longrightarrow \left\langle \begin{matrix} 1 \\ +A \end{matrix} \right\rangle, 2, \ldots, n$

T-Shift $\left\{\begin{matrix} S \backslash NP \\ NP \backslash VP^1 \\ TENSE \\ A \end{matrix}\right\} \longrightarrow \emptyset \longrightarrow A/(1, \_\_, 2, \ldots, n) \backslash VP^1$

T-Q $NP^1 \longrightarrow \emptyset \longrightarrow NP^1 \,/\, 1, \_\_, 2, \ldots, n \backslash VP$

T-Haben: $haben \hat{} geX \longrightarrow geX \hat{} haben$

T-Modal: $MODAL^1 \longrightarrow \emptyset \longrightarrow MODAL^1 \,/\, (1, FUT, 2, \ldots, n \_\_) \backslash VP$

T-Rel: 1. $\begin{matrix} NP \\ | \\ N^1 \end{matrix} \backslash S \backslash \begin{matrix} NP^1 \\ | \\ N^1 \end{matrix} \longrightarrow \left\{\begin{matrix} de \\ welch \end{matrix}\right\}$

2. $(1, 2, \ldots, n) \backslash VP \backslash S \backslash NP^1 \longrightarrow n, \ldots, 2, 1$

T-Pass:

1. $NP^1 \hat{} AUX \hat{} MV \hat{} NP^2$

   1 2 3 $\longrightarrow$ 4, 2, werden$\hat{}$ge, 3

2. ge$\hat{}$X $\longrightarrow$ geX

3. haben $\longrightarrow$ sein

4. $MV^1 \longrightarrow \emptyset \longrightarrow MV^1$ / (1 ___ 2, ..., n) \ VP

5. $NP^1 \longrightarrow \emptyset \longrightarrow$ von$\hat{}NP^1$ 2/ (1 __ 2, ..., n)\ VP

6. ge $\longrightarrow \emptyset$ / ge$\hat{}$X ___

7. von $\longrightarrow$ durch / ___ ..... $\langle$ +N / -ANIM $\rangle$

T-Null: $\left\{\begin{matrix}\text{POSS}\\ \text{TRANS}\\ \text{IS}\end{matrix}\right\} \longrightarrow \emptyset$

Explanation of Symbols

Superscripts express identity conditions. Similarly a large formula that has to appear again somewhere else in the same rule is subscripted by a symbol, usually 'A', which is then used in turn as a short-hand symbol of the subscripted expression in its stead. Curly brackets or commas express logical disjunction. Parentheses delimit an argument on either side of an operator. Angled brackets contain complex symbols that are headed by a category name which is said to be possessed of the features marked below it. Features may be marked present, '+' or absent, '-'. Slashes from 11 o'clock to 5 o'clock, '\', are followed by the dominating node of the expression on the left-hand side of the slash. If an expression is to be specified as dominating another given node, it is marked vertically above such a node and connected to it by a vertical line. A slash from 7 o'clock to 1 o'clock, '/', is followed by a linear environment of the expression to the left of such a slash. Arrows, '$\longrightarrow$', are rewrite orders. A null-string is indicated by 'Ø'. Substrings are catenated by the catenation symbol '^'. Number subscripts indicate case. Numbers by themselves are variables to which other names are passed on contextually. The

final number of a numerical series is denoted as 'n'. Dots, '....', indicate potential additions to a series.

Explanation of Rules

The case transformations add a case marker to noun phrases in specified environments. T-Prop drops the determiner in front of proper nouns. This rule requires some refinement since the determiner in 'die Mosel' is obligatory whereas with human proper nouns it is not. T-Del states that an NP is rewritten as null, subject to three conditions; 1. it must be dominated by S which in turn is dominated by an NP, 2. both NP's must dominate identical nouns, 3. the eliminated NP must have been followed by either POSS, TRANS, or IS. T-Es is a transformation that has to be invoked by a signal in the base and inserts 'es'. T-Q removes an NP at some unspecified place in the string and replaces it at a specified position in the VP. Like T-ES, this transformation must be invoked by the base. T-GE detaches 'ge', which is a short-hand symbol for the past participle, from 'haben' and attaches it to the adjacent part of the verb phrase on its right-hand side. T-Tense has two parts; 1. following the category symbol FUT 'werden' is injected, 2. the first member of the VP

acquires the feature [+PRES] or [+PAST]. Phonological rules, not given in this fragment, will convert this complex into the proper verb form, e.g. $\langle \overset{\text{arbeiten}}{+\text{ PAST}} \rangle \longrightarrow$ arbeitete. For ablauted verb forms see Ross, 1967.[1] T-Shift is the rule described in connection with the store position in the verb phrase. T-Haben must be refined so as not to exclude 'er hat geschossen'. It operates in dependent clauses, e.g. '..., den er geschossen hat'. T-Modal switches the modal into the last position of the VP if the tense marker is FUT, e.g. 'Er wird kommen duerfen'. T-Rel 1. replaces NP by 'der' or 'welcher' and 2. inverts the order of the elements of the VP. T-Pass has seven parts, but only 1, 4, 7 are peculiar to the passive transformation. 2. applies everywhere, 3. is required for verbs of motion, e.g. 'Er ist gegangen' from '*Er hat gegangen' at the deep level; 5. is identical for T-Q except that here we add 'von' and the dative case.

The following part of the appendix gives a few P-markers and derived P-markers.

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[1]John Ross, "Ablaut bei den Deutschen Verben," Studia Grammatica VI, 1967, pp. 47-118.

T-Part: PART ⟶ Ø ⟶ PART/POSS ___

Source: Fig. 3

Derived P-marker:

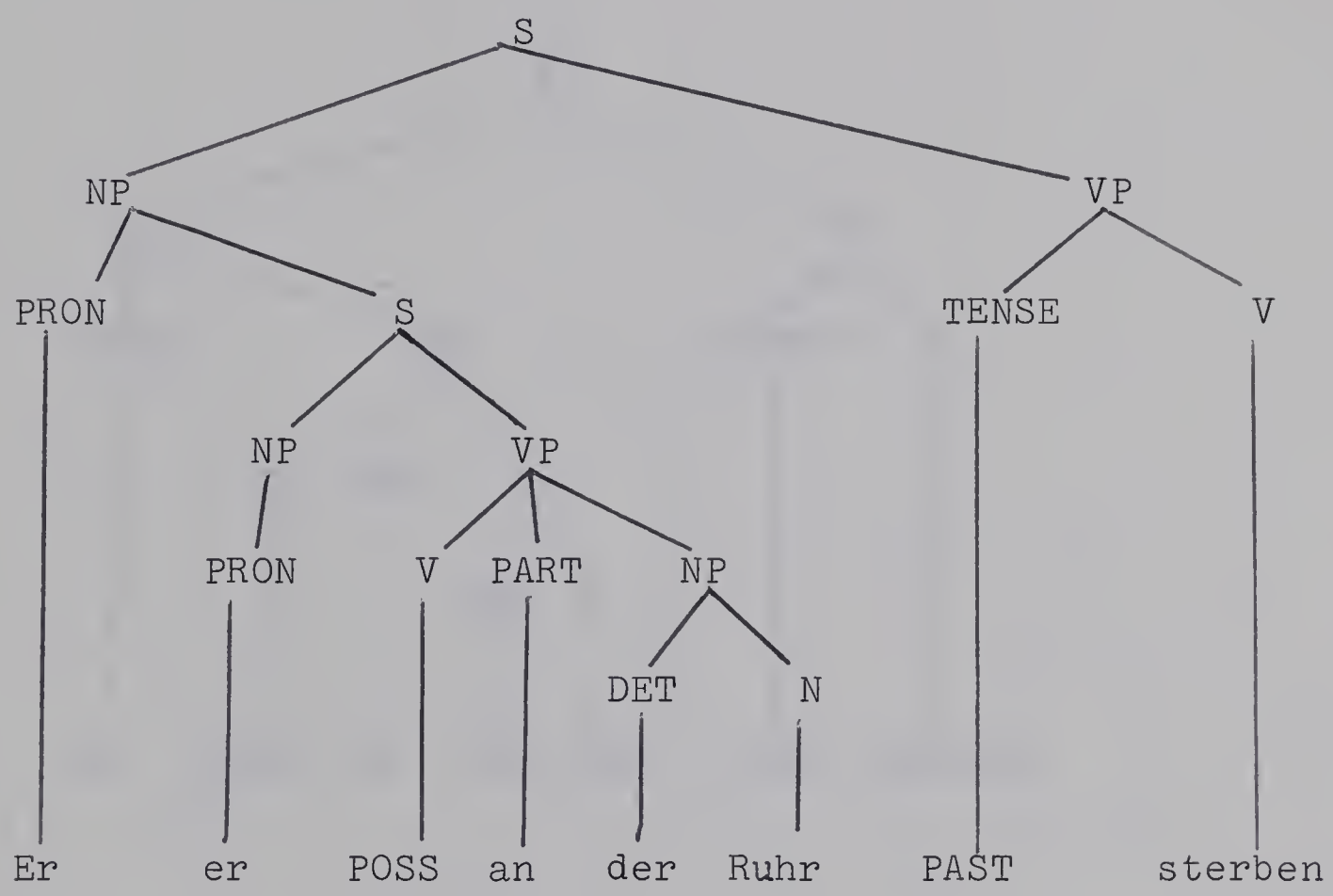


Fig. 11

T-Del: $NP_{N^1} \longrightarrow \emptyset \setminus S \setminus NP_{N^1} \;/\; \_\_\_\; POSS$

Source: Fig. 11

Derived P-marker:

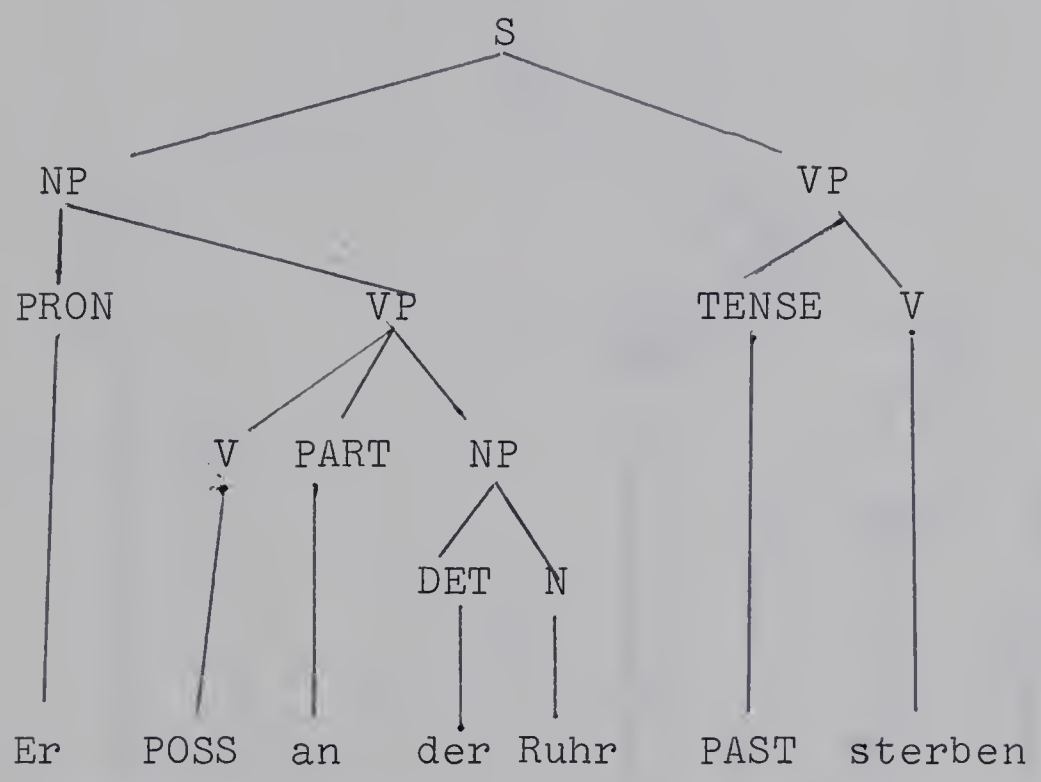


Fig. 12

T-Q: $NP^1 \longrightarrow \emptyset \longrightarrow NP^1$ / 1, 2, ..., n \ VP

Source: Fig. 12

Derived P-marker:

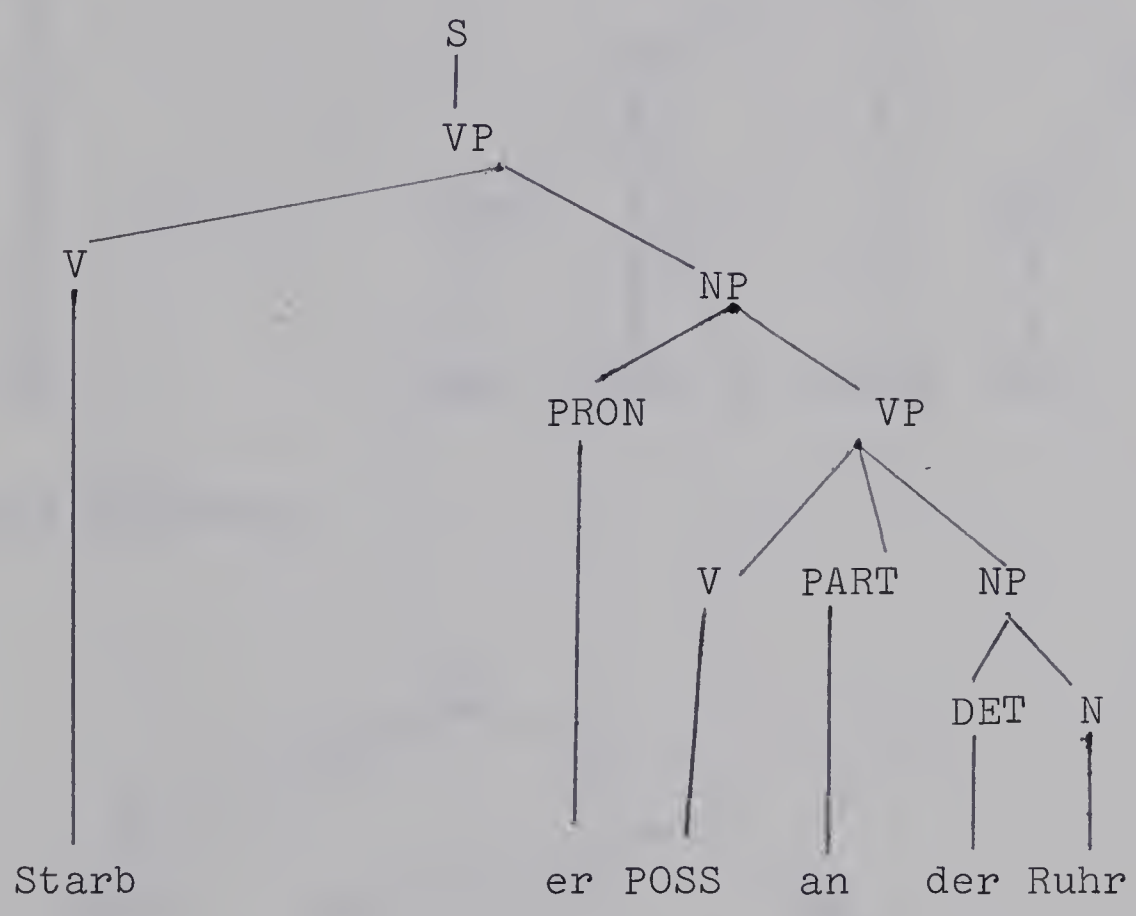
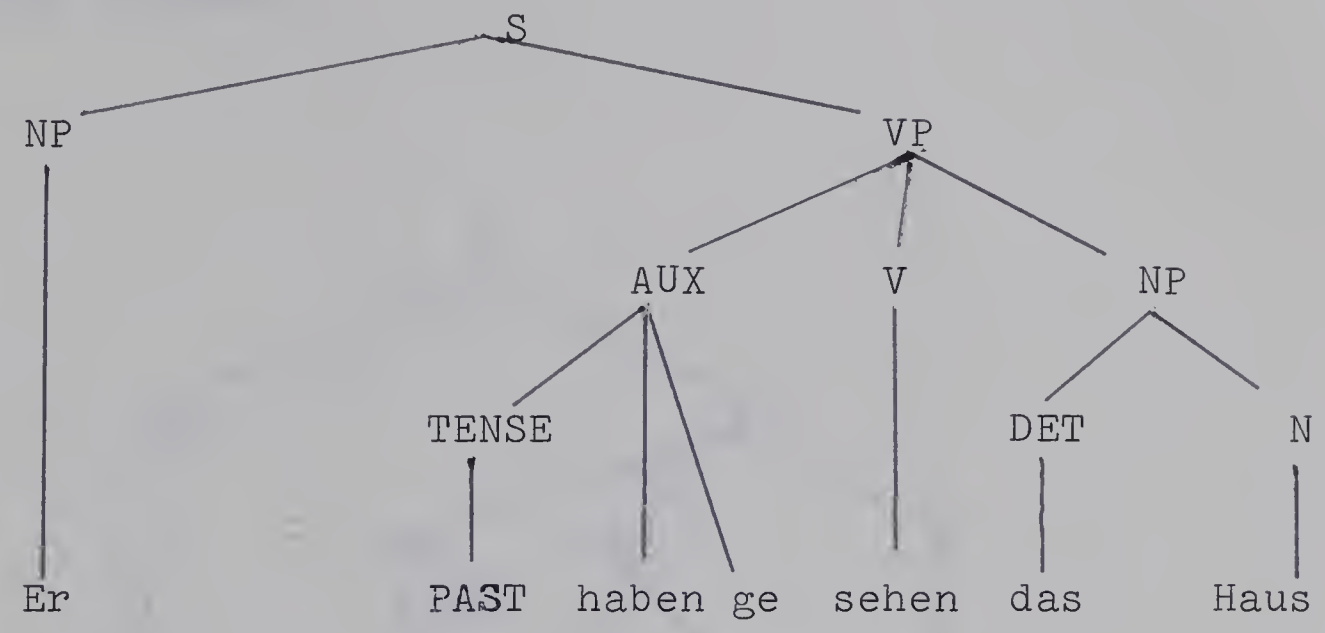


Fig. 13

T-Tense: $(PAST, 1, 2, \ldots, n) \setminus VP \longrightarrow \left\langle \overset{1}{+\ PAST} \right\rangle, 2, \ldots, n$

T-GE: $ge \wedge X \longrightarrow geX$

Source:



Derived P-marker:

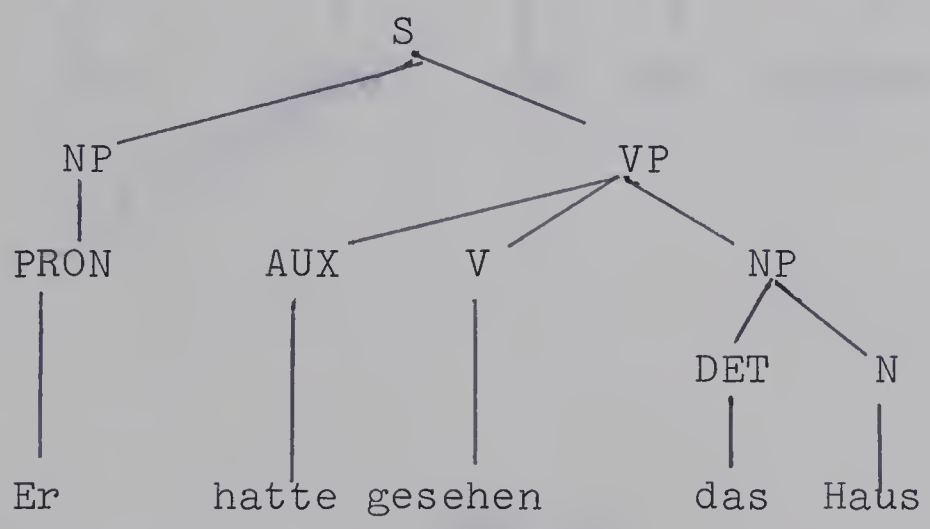


Fig. 14

T-Shift: $NP \setminus VP^1 \longrightarrow \emptyset \longrightarrow NP / (1 \_\_ 2, \ldots, n) \setminus VP^1$

Source: Same as source in Fig. 14

Derived P-marker:

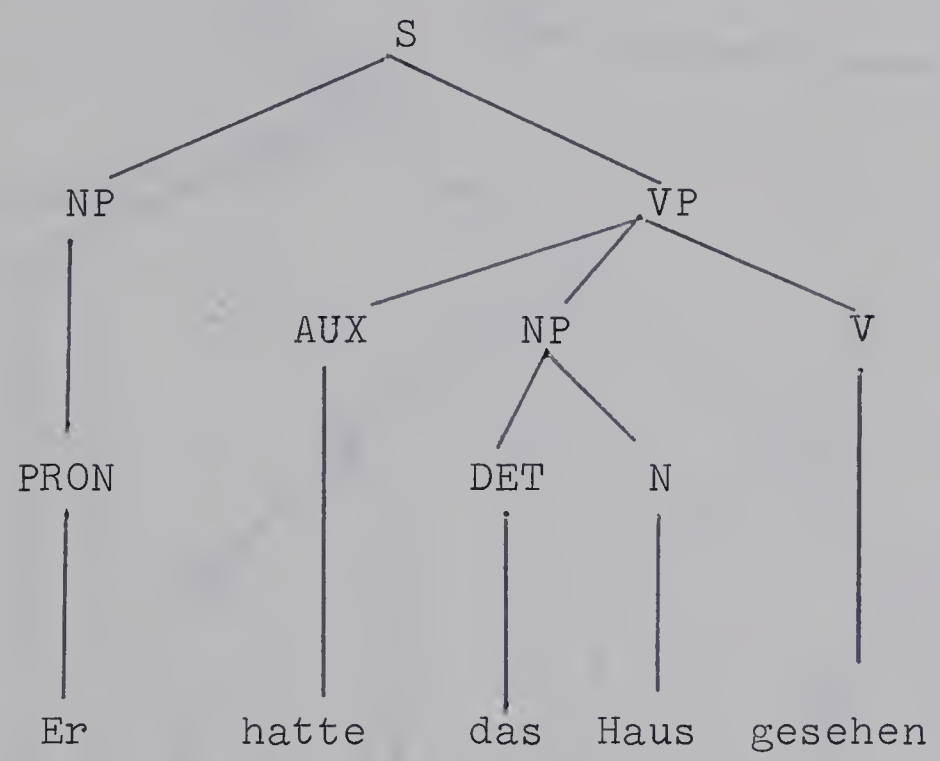


Fig. 15

T-Rel 1. $NP \backslash S \backslash NP^1 \longrightarrow de$
$N^1 \quad N^1$

Source:

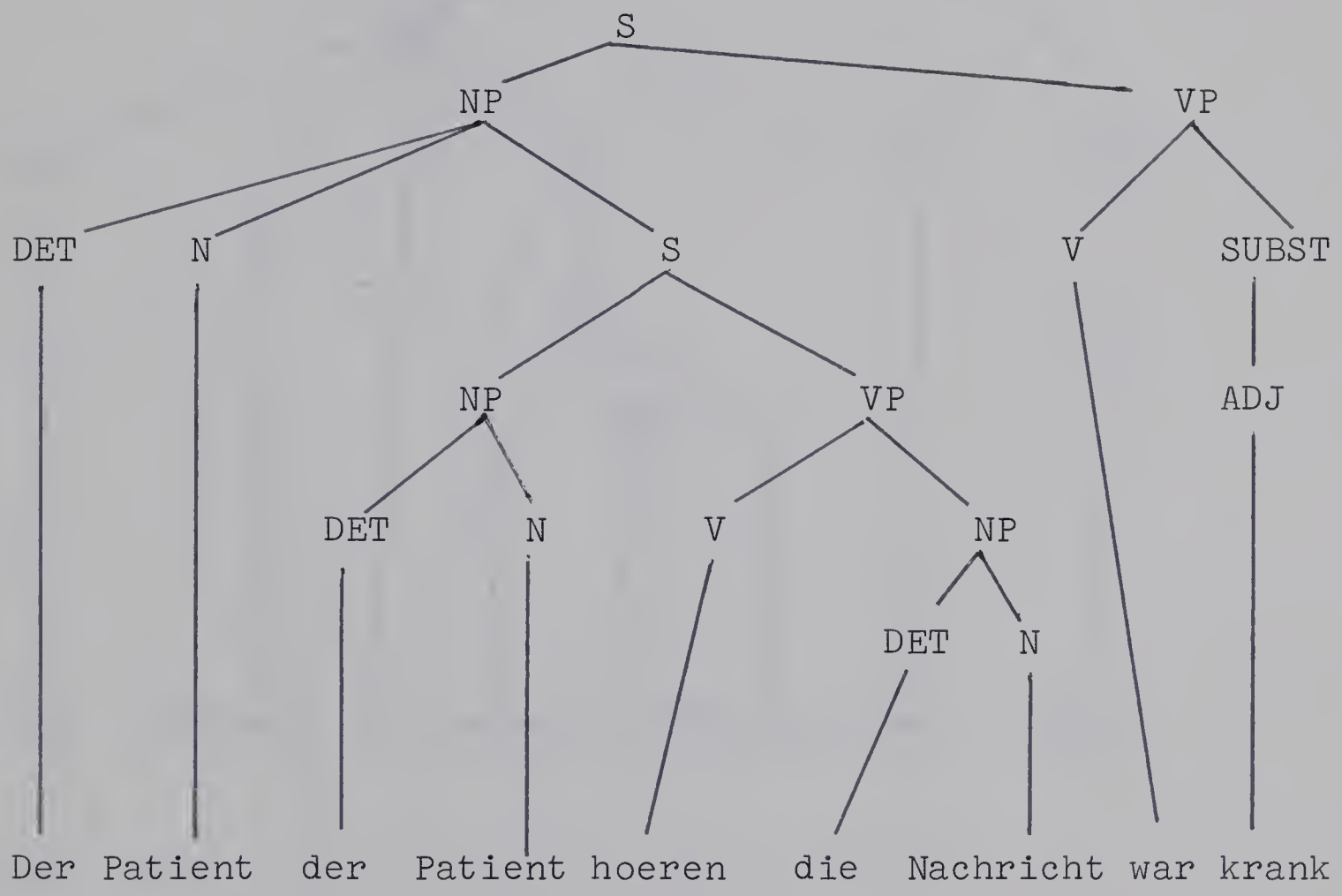


Fig. 16

Derived P-marker:

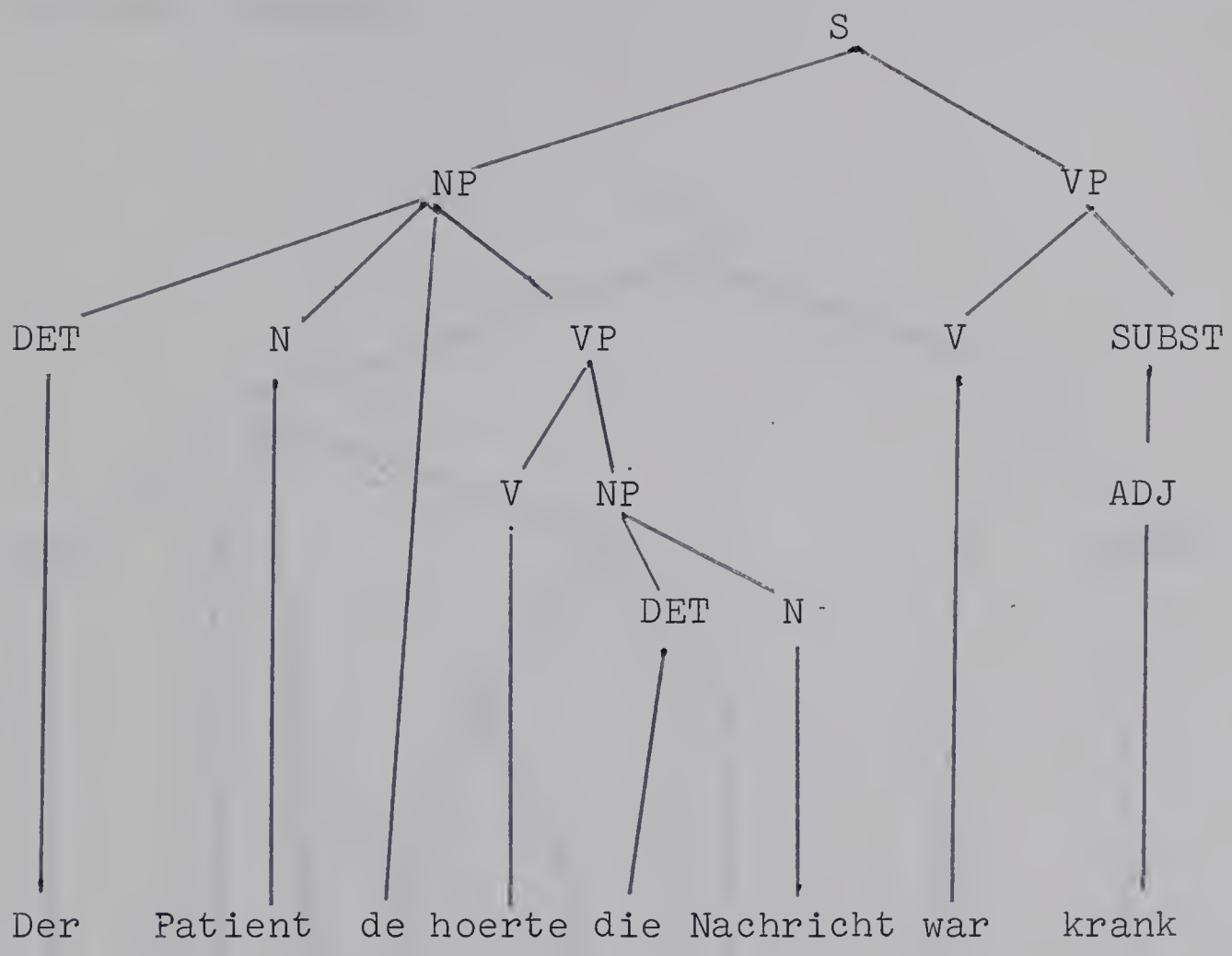


Fig. 17

T-Rel 2. $(1, 2, \ldots, n) \setminus VP \setminus S \setminus NP^1 \longrightarrow n, \ldots, 2, 1$

Source: Fig. 17

Derived P-marker:

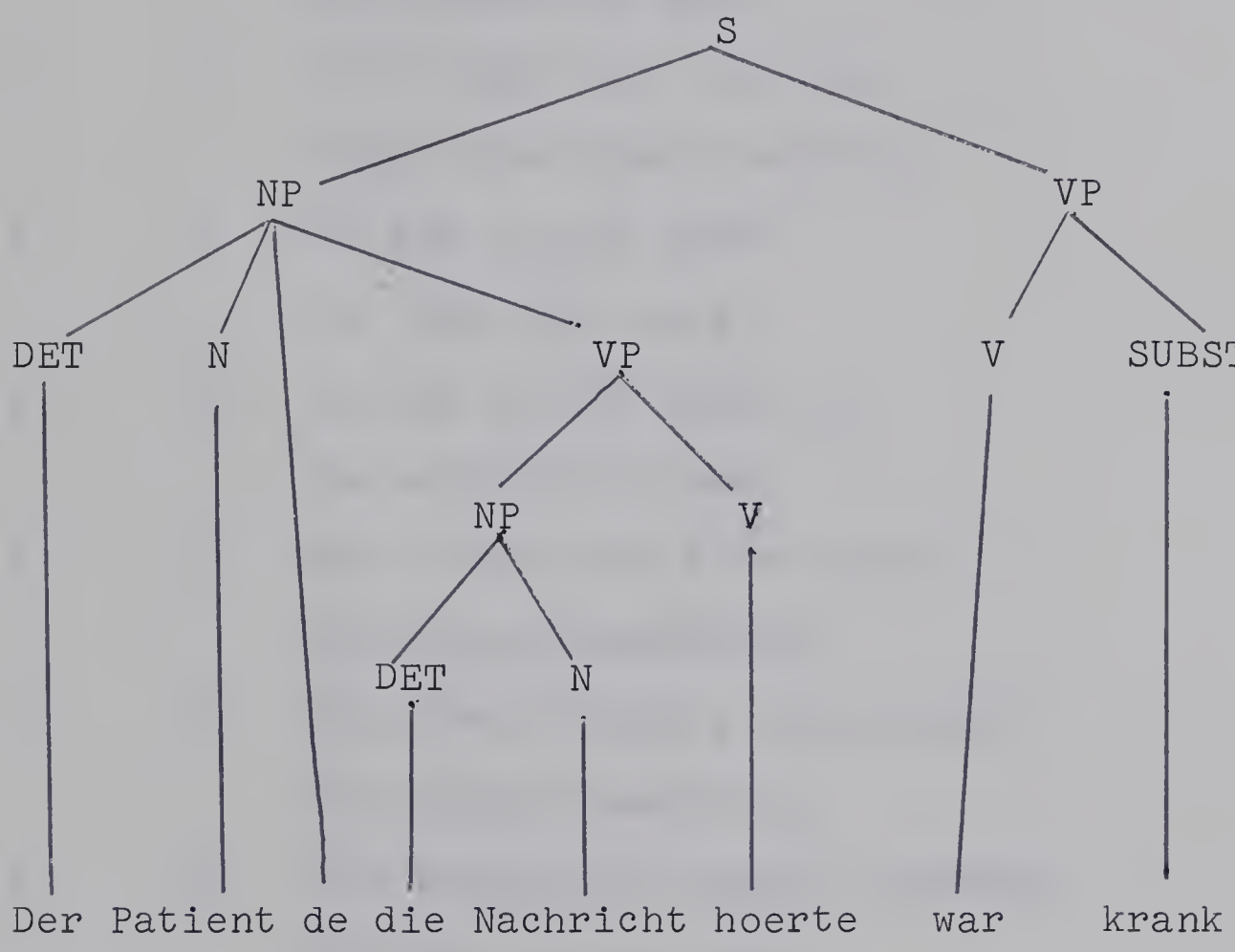


Fig. 18

List of Sentences

No.	Page	Sentence
1	6	Sein Herz schlug der ganzen Menschheit
		His heart beat for all of humanity
2	6	Das Pferd lief ihm fort
		His horse ran away
3	8	Herr ueber Tod und Leben
		Ruler over death and life
4	9	Er kam in die Stadt
		He came into town
5	9	Er kam in der Stadt an
		He arrived in town
6	9	Man freut sich einer Sache
		One enjoys something
7	9	Man freut sich an einer Sache
		One enjoys something
8	17	Der Ruecken des Mannes schmerzt
		The man's back hurts
8a	17	Dem Mann schmerzt der Ruecken
		The man's back hurts
9	19	Meinem Freund starb die Mutter
		My friend's mother died
10	19	Peters Vater ist uns gestorben
		"We regret that" Peter's father died

No.	Page	Sentence
10a	20	Peters Vater ist gestorben
		Peter's father died
10b	20	Unser Vater ist gestorben
		Our father died
11	24	Peters Vater ist uns gestern an der Ruhr gestorben
		Peter's father has died of dysentery yesterday,
		"we regret"
12	31	. . . . an der Ruhr sterben
		. . . . to die of dysentery
12a	31	. . . . an seiner Ruhr sterben
		. . . . to die of one's dysentery
13	35	Der Patient hoerte die Neuigkeit mit Vergnuegen
		The patient heard the news with pleasure
14	35	Der Patient hoerte die Neuigkeit mit seinen Ohren
		The patient heard the news with his ears
15	36	Der Preis ist unter Umstaenden zu hoch
		Possibly the price is too high
16	36	Der Ingenieur hat das Fundament ueber dem Grundwasserspiegel angefunden
		The engineer found the foundation above the watertable

No.	Page	Sentence
17	36	Er hat seine Plaene an der Mosel abgeschlossen
		He finished his plans on the river Mosella
18	42	Peters Vater, ein treuer Diener vor dem Herrn,
		Peter's father, a trusty servant of the Lord,
		ist uns gestern an der Ruhr gestorben
		died yesterday of dysentery, "we regret"
19	44	Das Bild haengt ueber dem Fenster
		The picture hangs above the window
20	44	Er haengt das Bild ueber das Fenster
		He hangs the picture over the window
21	45	Er steigt auf das Pferd
		He mounts the horse
21a	45	Er sitzt auf dem Pferd
		He sits on the horse
22	45	Er kriecht unter das Auto
		He crawls under the car
22a	45	Er liegt unter dem Augo
		He lies under the car
23	45	Er geht unter die Leute
		He walks into the people
23a	45	Er lebt unter den Leuten
		He lives among the people

No.	Page	Sentence
24	45	Er stellt die Milch vor die Tuer
		He puts the milk in front of the door
24a	45	Er steht vor der Tuer
		He stands in front of the door
25	46	Er lebt den Leuten
		He lives for the people
26	46	Die Nachricht ist fuer den Patienten wichtig
		The news is important for the patient
27	46	Die Nachricht ist dem Patienten wichtig
		The news is important to the patient
28	48	Es haengt das Bild ueber dem Fenster
		The picture hangs over the window
29	49	Es ist mir recht
		It is alright with me
30	49	Er besitzt das Haus
		He owns the house
31	51	Das Haus gehoert ihm
		The house belongs to him
32	53	Er starb fuer das Vaterland
		He died for the fatherland
33	57	Peter zerbrach mir die Vase
		Peter broke the vase for me

No.	Page	Sentence
33a	57	Peter zerbrach meine Vase
		Peter broke my vase
33b	57	Peter zerbrach mir Mutters vase
		Peter broke my mother's vase for me
34	59	Mir ist Peters Schluessel ins Wasser gefallen
		"It happened to me that" Peter's key fell into the water
34a	59	Ich habe Peters Schluessel ins Wasser fallen lassen
		I permitted Peter's key to fall into the water
34b	60	Peters Schluessel ist im Wasser gelandet
		Peter's key landed in the water
35	60	Mir ist dieser Dachziegel beim Fall zerbrochen
		"It happened to me that" this shingle broke in a fall
35a	60	Dieser Dachziegel ist bei meinem Fall zerbrochen
		This shingle broke during my fall

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